ILE 'HOME' ENTERED AT 15:16:54 ON 26 MAR 2001

=> file medline

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.15	0.15

FILE 'MEDLINE' ENTERED AT 15:17:07 ON 26 MAR 2001

FILE LAST UPDATED: 22 MAR 2001 (20010322/UP). FILE COVERS 1958 TO DATE.

MEDLINE now contains new records from the former NLM HEALTH STAR database. These records have an Entry Date and Update Date of 20010223.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2001 vocabulary. Enter HELP THESAURUS for details.

The OLDMEDLINE file segment now contains data from 1958 through 1965. Enter HELP CONTENT for details.

Left, right, and simultaneous left and right truncation are available in the Basic Index. See HELP SFIELDS for details.

THIS FILE CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE SUBSTANCE IDENTIFICATION.

MEDLINE has been updated with new records for the 2001 production year (20010322/UP). NLM is still in the process of preparing data. Therefore, regular updates to the file are not in place. As soon as NLM makes the regular updates available, we will process the update.

=> s aboudy

L1 1 ABOUDY

=> d l1 bib ab

L1 ANSWER 1 OF 1 MEDLINE
AN 93352796 MEDLINE
DN 93352796
TI Identification of feline- and canine-like rotaviruses isolated from humans by restriction fragment length polymorphism assay.
AU [illegible] A; Shif I; Silberstein I; Rudich H; Aboudy Y; Mendelson E; Zinkhan L; Nakagomi T; Nakagomi O
CS Central Virology Laboratory, Chaim Sheba Medical Center, Tel-Hashomer, Israel.
SO JOURNAL OF CLINICAL MICROBIOLOGY, (1993 Jul) 31 (7) 1783-7.
Journal code: HSH. ISSN: 0095-1137.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English

to differentiate [redacted]an serotype 3 rotaviruses from animal serotype 3 rotaviruses. On the basis of similarities or diff[redacted]ces in HinfI and DdeI restriction profiles, unusual group A serotype 3 human rotaviruses that belonged to subgroup I were shown to be of feline and canine origin. By this approach, the new human rotavirus isolates 5193, AU-387, AU-720, AU-785 and AU-1115 were shown to resemble certain feline-like human rotaviruses. Similar results were previously obtained by Nakagomi et al. (O. Nakagomi, A. Hoshima, Y. **Aboudy**, I. Shif, M. Mochizuki, T. Nakagomi, and T. Gotlieb-Stematsky. J. Clin. Microbiol. 28:1198-1203, 1990) by using RNA-RNA cross hybridization with established feline rotaviruses. The restriction fragment length polymorphism assay can provide fast and valuable information on the interspecies transmission of rotaviruses in nature.

=> rotavirus

ROTAVIRUS IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s rotavirus

L2 5698 ROTAVIRUS

=> s monoclonal

L3 150723 MONOCLONAL

=> s vero

L4 6827 VERO

=> s serotype?

L5 17725 SEROTYPE?

=> s vaccine?

L6 90308 VACCINE?

=> s L2 and l3 and l4 and l5 and l6

L7 0 L2 AND L3 AND L4 AND L5 AND L6

=> s L2 and l3

L8 [illegible]67 L2 AND L3

=> s l4 and l4

L9 1 L8 AND L4

=> d l9 bib ab

L9 ANSWER 1 OF 1 MEDLINE

CS Department of Population Medicine, Ontario Veterinary College, University of Guelph..
SO CANADIAN JOURNAL OF VETERINARY RESEARCH, (1992 Jul) 56 (3) 184-8. Journal code: CKL. ISSN: 0830-9000.
CY Canada
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199302
AB A case-control study of diarrheal disease in veal calves was conducted over a three month period on a single large veal farm in southern Ontario.
One hundred diarrheic calves (cases) were identified by visual examination of their feces. Each case was matched to two nondiarrhetic controls from the same room on the same day, and a fecal sample was obtained from each animal. Fecal consistency of cases and controls was observed daily for one week following sample collection. Control calves which developed diarrhea during that period were excluded from the study. Breed, sex and the date and nature of antimicrobial drugs administered to each calf were recorded.
Moisture content of fecal samples was measured by weighing samples before and after oven drying. Samples were screened for verocytotoxigenic Escherichia coli (VTEC) using a **Vero** cell assay, for enterotoxigenic E. coli (ETEC) using an immunoblot procedure with anti-K99 **monoclonal** antibodies, and for Salmonella species using modified semi-solid Rappaport-Vassiliadis medium. A latex agglutination test was used to detect rotaviruses, and samples were examined for cryptosporidia using sucrose wet mounts. No VTEC were identified in cases or controls. One calf was positive for Salmonella and three were positive for ETEC. Rotaviruses were detected in four cases and four controls. A significant positive association was found between diarrhea and infection with Cryptosporidium. This study thus provided no evidence of an association between diarrhea and infection with either VTEC, ETEC, Salmonella spp. or rotaviruses in the population examined. On the other hand our results do suggest that Cryptosporidium infection may promote transient diarrheal disease in veal calves in Ontario.

=> s l2 and l3 and l5

L10 226 L2 AND L3 AND L5

=> s l10 and l6

L11 [illegible] L10 AND L6

=> d l11 [illegible] bib ab

L11 ANSWER 1 OF 32 MEDLINE
AN 2000499944 MEDLINE
DN 20436016
TI Annual report of the **Rotavirus** Surveillance Programme, 1999/2000.
AU Masendycz P; Bogdanovic-Sakran N; Palombo E; Bishop R; Barnes G
CS National Rotavirus Reference Centre, Royal Children's Hospital, [illegible]

LA English
EM 200012
EW 20001204
AB The National **Rotavirus** Reference Centre has conducted **rotavirus** surveillance by means of a collaborative laboratory based initiative started in June 1999. The **serotypes** of rotaviruses that lead to the hospitalisation of children with acute diarrhoea were determined from June 1999 to May 2000. We examined 1126 **rotavirus** specimens using a combination of **monoclonal** **rotavirus** enzyme immunoassay, reverse transcription-polymerase chain reaction, and hybridisation. The four most common **serotypes** G1-G4 were represented. More than 50% of isolates tested were **serotype** G1, with **serotype** G1 being represented in most centres Australia-wide. **Serotype** G9 rotaviruses were identified for the first time in Australia, and were second in importance with 10% of samples tested. The significant presence of G9 viruses throughout Australia suggests the emergence of a new **serotype** and has implications for current **rotavirus vaccine** strategies that target **serotypes** G1-G4.

L11 ANSWER 2 OF 32 MEDLINE
AN 2000402093 MEDLINE
DN 20457088
TI **Serotypes** and subgroups of **rotavirus** isolated from children in central Brazil.
AU Carvalho das D; Soares C M; Azevedo M S; Leite J P; Munford V; Raez M L
CS Lab. Virologia/IPTSP/UFG-Goiania-GO, Brazil.. divina@netgo.com.br
SO JOURNAL OF HEALTH, POPULATION, AND NUTRITION, (2000 Jun) 18 (1) 39-43. Journal code: DTT. ISSN: 1606-0997.
CY Bangladesh
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200012
AB Group A **rotavirus**, obtained from children of Goiania, Brazil, during 1987-1994, were analyzed for subgroup and G **serotype** by enzyme-linked immunosorbent assay with **monoclonal** antibodies. The index of serotyping obtained was 61.4% with the following proportions: G1--19.7%, G2--28.0%, G3--9.8%, G4--1.5%, and G5--2.3%. It was observed that G1 occurred from 1987 to 1989 and from 1993 to 1994, and G2 from 1990 to 1993. About 94% of the samples (85/90) could be subgrouped with the following results: 55.5% for SG II, 7.8% SG I, and 31.1% for SG non-I-non-II. Unusual relationship patterns were also detected among **serotypes**, subgroups, and profiles of electropherotypes in 57.0% of the samples: 20 of them were G2/SG II/"long" profile. The results suggest that variation in temporal and regional characteristics should be considered in the development of **rotavirus vaccine**.

L11 ANSWER 3 OF 32 MEDLINE
AN 2000[illegible]085 MEDLINE
DN 20047[illegible]5
TI Comparative studies of human **rotavirus serotype** G8 strains recovered in South Africa and the United Kingdom.
AU [illegible] A D; Parker S P; Pearce I; Pager C T; Taylor M B; Cubitt W D
CS MRC/MEDUNSA Diarrhoeal Pathogens Research Unit, PO Box 173, Medunsa 0204, [illegible] (dstrasle@medunsa.ac.za

FS Priority Journals; Cancer Journals
OS GENBANK-AF14368[redacted] GENBANK-AF143689; GENBANK-AF14[redacted]0
EM 200003
EW 20000324
AB Epidemiological studies on the VP7 **serotype** prevalence of human rotaviruses in South Africa and the United Kingdom identified several strains which could not be **serotyped** as G1-G4 by **monoclonal** antibodies. Further analysis of these strains with a G8-specific **monoclonal** antibody and with probes for human rotaviruses confirmed them as G8 rotaviruses. These G8 strains exhibited a high degree of sequence identity when compared with each other and with other **rotavirus** G8 strains. Five South African strains were further characterized as VP6 subgroup I, but with a long RNA electropherotype, which is similar to the G8 strains previously isolated in Finland. In the UK strains, one was VP6 subgroup II with a long RNA electropherotype (similar to the Italian G8 strain). The other two were subgroup I with a short RNA electropherotype. None of these strains exhibited the super-short RNA electropherotype described in the prototype G8 strains recovered from Indonesia (69M).

L11 ANSWER 4 OF 32 MEDLINE
AN 1999263789 MEDLINE
DN 99263789
TI Evidence of high-frequency genomic reassortment of group A **rotavirus** strains in Bangladesh: emergence of type G9 in 1995.
AU Unicomb L E; Podder G; Gentsch J R; Woods P A; Hasan K Z; Faruque A S; Albert M J; Glass R I
CS International Centre for Diarrhoeal Disease Research, Bangladesh, Dhaka, Bangladesh.
SO JOURNAL OF CLINICAL MICROBIOLOGY, (1999 Jun) 37 (6) 1885-91.
Journal code: HSH. ISSN: 0095-1137.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199907
EW 19990714
AB We characterized 1,534 **rotavirus** (RV) strains collected in Bangladesh from 1992 to 1997 to assess temporal changes in G type and to study the most common G and P types using reverse transcription-PCR, oligonucleotide probe hybridization, and **monoclonal** antibody-based enzyme immunoassay. Results from this study combined with our previous findings from 1987 to 1991 (F. Bingham et al., J. Clin. Microbiol. 29:862-868, 1991, and L. E. Unicomb et al., Arch. Virol. 132:201-208, 1993) (n = 2,519 fecal specimens) demonstrated that the distribution of the four major G types varied from year to year, types G1 to G4 constituted 51% of all strains tested (n = 1,364), and type G4 was the most prevalent type (22%), followed by type G2 (17%). Of 351 strains typed for both G and P types, three globally common types, type P[8], G1, type P[4], G2, and type P[8], G4, comprised 47% (n = 165) of the strains, although eight other strains were circulating during the study period. Mixed G and/or P types were found in 23% (n = 78) of the samples tested. Type G9 RVs that were genotype P[6] and P[8] with both long and short electrophoretic patterns emerged in 1995. The finding of five different genotypes among G9 strains, of which three were frequently detected, suggests that they may have an unusual propensity for reassortment that is unlike that found among the common G types. We also detected antigenic changes in **serotypes** G1 and G4 over time, as indicated by the [redacted] monoclonal [redacted]

L11 ANSWER 5 OF 32 MEDLINE
AN 1999018778 MEDLINE
DN 99018778
TI Development of a fluorescent focus identification assay using **serotype**-specific **monoclonal** antibodies for detection and quantitation of rotaviruses in a tetravalent **rotavirus vaccine**.
AU Yang I P; Goldberg K M; Ma X D; Magargle W; Rappaport R
CS Wyeth Ayerst Research, Philadelphia, Pennsylvania 19101, USA.
SO CLINICAL AND DIAGNOSTIC LABORATORY IMMUNOLOGY, (1998 Nov) 5 (6) 780-3.
Journal code: CB7. ISSN: 1071-412X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199901
EW 19990104
AB A fluorescent focus identification assay (FFIDA) was developed for use in experimental studies and for quantitation of the components in a tetravalent live oral **rotavirus vaccine**. The assay utilizes four **serotype**-specific neutralizing **monoclonal** antibodies (MAb) to detect and quantify individual rotaviruses by immunofluorescence staining of fixed virus-infected monkey kidney cells. In mixed virus infections, all four MAb, W1 (**serotype** 1), 1C10 (**serotype** 2), F1 (**serotype** 3), and S4 (**serotype** 4), specifically stain the relevant homologous **serotype** without exhibiting any cross-reactivity against the other **serotypes**. Furthermore, the test is sensitive enough to differentiate at least twofold (0.3 log) differences in virus titer. The results of testing four individual experimental **vaccine** lots three or more consecutive times showed that all four lots contained similar proportions of the four **vaccine** strains as detected by the classical plaque neutralization identification test. The rapidity and efficiency of the FFIDA are desirable attributes that make it suitable for use in studies requiring identification and quantitation of one or more of the four major **rotavirus serotypes**.

L11 ANSWER 6 OF 32 MEDLINE
AN 96255649 MEDLINE
DN 96255649
TI The Salmonella ompC gene: structure and use as a carrier for heterologous sequences.
AU Puente J L; Juarez D; Bobadilla M; Arias C F; Calva E
CS Departamento de Microbiologia Molecular, Universidad Nacional Autonoma de Mexico, Cuernavaca.
SO GENE, (1996 Apr 14) 156 (1) 1-9.
Journal code: FOP. ISSN: 0378-1119.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199605
AB The Salmonella typhi (St) ompC gene codes for a major outer membrane protein (OMP) that is highly expressed in both low and high osmolarity. By hybridization studies with the entire gene or with segments thereof, ompC was found to be highly conserved within 11 different Salmonella **serotypes**, with the exception of S. arizonae. The study included several St isolates from Mexico and Indonesia. Variation was only

preparations (by enzyme-linked immunosorbent assay; ELISA) or intact cells
by ELISA and immunogold-labelling), indicating that regions c and f are oriented towards the cell surface and are probably exposed. As has been shown before for other regulated OMP, this experimental approach could be useful for the presentation of heterologous epitopes in order to gain knowledge about porin topology, for testing the effect of altered porin surface epitopes on bacterial physiology, or else, in the development of multivalent **vaccines**.

L11 ANSWER 7 OF 32 MEDLINE
AN 95189251 MEDLINE
DN 95189251
TI Epidemiology, subgroups and **serotypes** of **rotavirus** diarrhea in north Indian communities.
AU Yachha S K; Singh V; Kanwar S S; Mehta S
CS Department of Gastroenterology, Postgraduate Institute of Medical Education and Research, Chandigarh..
SO INDIAN PEDIATRICS, (1994 Jan) 31 (1) 27-33.
Journal code: GM2. ISSN: 0019-6061.
CY India
DT Journal; Article; (JOURNAL ARTICLE)
LA English
EM 199506
AB To know prevalence of **rotavirus** diarrhea subgroups and **serotypes**, a prospective study was conducted in rural, periurban and urban communities at Chandigarh. Weekly surveillance for diarrheal episodes was carried out in 110 families each from rural, periurban and urban localities constituting 584 children < 5 years of age from October, 1988 to February, 1991. Stool samples of 218 diarrheal episodes occurring in 115 children were subjected to **rotavirus** detection by ELISA. **Rotavirus** positive samples were further analyzed for subgroups and **serotypes** using specific **monoclonal** antibodies. Overall prevalence of **rotavirus** diarrhea was 4.3% (25/584). **Rotavirus** constituted 11.5% (25/218) of total diarrheal episodes and 22% (25/115) among the children affected with acute diarrhea. Among rural, periurban and urban communities, the overall prevalences of **rotavirus** diarrhea were 7.3%, 3.2% and 2.3% and episode related prevalences of 31.8%, 7.4% and 5%, respectively (chi 2 test for trend was highly significant from rural to periurban to urban localities). Forty per
cent (10/25 of **rotavirus** positive samples were subgroup I and 60% (15/25) sub-group II. Of the 25 **rotavirus** strains, 40% (10) were **serotype** 2, 24% (n = 6) **serotype** 3 and 36% (n = 9) **serotype** 4. No definite temporal or seasonal pattern of **rotavirus** was observed; however, more of **rotavirus** diarrheal episodes (16%) occurred during winter season. Subgroups and **serotypes** were observed to cocirculate during the **rotavirus** episodes. Demonstration of **serotypes** in our [illegible] study imply that the **vaccine** to be used in our country must be cross protective to have an effective impact on **rotavirus** infections. (ABSTRACT TRUNCATED AT 250 WORDS)

L11 ANSWER 8 OF 32 MEDLINE
AN 95196[illegible] MEDLINE
DN 95196[illegible]
TI [illegible]rotyping of human rotaviruses in the Tokyo area (1990-1993) by enzyme immunoassay with **monoclonal** antibodies and by reverse transcription and polymerase chain reaction amplification.
AU [illegible] H; Mukoyama A; Hasegawa A; Nishimura S; Kitaoka M; Bosu R

LA English.
FS Priority Journa
EM 199615
AB Serotyping of human **rotavirus** in the Tokyo area was conducted from 1990 to 1993 by enzyme immunoassay with **monoclonal** antibodies (EIA-MAbs) against VP7 and by reverse transcription and polymerase chain reaction (RT-PCR) amplification of the VP4 and VP7 genes.
The results by EIA-MAbs were very similar to those obtained by RT-PCR. Evidence of intraserotypic variations was suggested because strains of undetermined **serotypes** were detected by either EIA-MAb or RT-PCR. This kind of study is required for **vaccine** development.

L11 ANSWER 9 OF 32 MEDLINE
AN 95063895 MEDLINE
DN 95063895
TI [Frequency of **serotype** G **rotavirus** isolated from children with diarrhea in Merida, Yucatan, Mexico].
Frecuencia de serotipos G de **rotavirus** aislados de ninos con diarrea en Merida, Yucatan, Mexico.
AU Gonzalez-Losa M R; Puerto-Solis M; Polanco-Marin G G; Peniche-Rodriguez R;
Puerto F I
CS Departamento de Virologia del Centro de Investigaciones Regionales, Universidad Autonoma de Yucatan, Merida..
SO REVISTA DE INVESTIGACION CLINICA, (1994 May-Jun) 46 (3) 215-9.
Journal code: SCH. ISSN: 0034-8376.
CY Mexico
DT Journal; Article; (JOURNAL ARTICLE)
LA Spanish
EM 199502
AB During a period of six years (1989-1990), **rotavirus** G **serotypes** were investigated in 104 fecal samples isolates according to an immune enzyme assay using specific **monoclonal** antibodies against **serotypes** 1, 2, 3, and 4 of the VP7. The **serotypes** were established in 65 samples (62.5%) and could not be determined in 39 samples. In the 65 classified **serotypes**, 7 (6.7%) were found to belong to **serotype** 1, 23 (22.1%) to **serotype** 2, 12 (11.5%) to **serotype** 3, and 23 (22.1%) to **serotype** 4. The occurrence of the four **serotypes** during the six years was: **serotype** 3 was present in three of the six years; **serotype** 2 was detected in two epidemic outbreaks (1989 and 1990); **serotype** 3 appeared in the second year and was seen in the remainder of the study; and **serotype** 4 was present in the six years. We conclude that the four **serotypes** occur in our population and that future efforts to test the efficacy of any **vaccine** against this virus should evaluate a protective response against the four **serotypes**.

L11 ANSWER 10 OF 32 MEDLINE
AN 94217915 MEDLINE
DN 94217915
TI [Characterization of antigenic types of circulating rotaviruses in Mendoza, Argentina based on typing of the external VP7 capsid protein].
Caracterizacion de tipos antigenicos de **rotavirus** circulantes en Mendoza, Argentina en base a tipificacion de la proteina de la capside externa VP7.
AU Espul C; Chello H; Navarta L M; Mamani N; O'Ryan M; O'Ryan M
CS Departamento de Bacteriologia Clinica, Hospital Central de Mendoza, Republica

(MULTICENTER STUDY)
LA Spanish
FS Priority Journals
EM 199409
AB **Rotavirus** is one of the most common etiologic agents of acute diarrhea in childhood. Understanding the immunologic mechanisms involved in **rotavirus** diseases, including knowledge on seasonal and geographic antigenic variations may be crucial for **vaccine** development. A **monoclonal** antibody based ELISA specific for antigenic domains in the outer capsid protein VP7 has been developed and used widely in the past years. We studied the **rotavirus** VP7-**serotype** epidemiology causing diarrhea in children who consulted at two main hospitals of Mendoza, Argentina over a 20 month period. A total of 227 cases of diarrhea were identified, 46 of which (20%) were **rotavirus** positive. We're able to **serotype** 43 viruses (96%), 42 VP7-type 1 and one VP7-type 3. The VP7-type 3 was detected towards the end of the second year, possibly representing a new incoming VP7-type. Three electropherotype patterns were identified, two corresponding to VP7-type epidemiology in Mendoza, Argentina seems to be characterized by a relatively homogeneous pattern of circulation with a strong predominance of VP7-type 1 viruses, at least during the 20 month period studied, in contrast to what has been reported in larger, more cosmopolitan cities like Buenos Aires.

L11 ANSWER 11 OF 32 MEDLINE
AN 94160507 MEDLINE
DN 94160507
TI Immunogens of rotaviruses.
AU Paul P S; Lyoo Y S
CS Veterinary Medical Research Institute, College of Veterinary Medicine, Iowa State University, Ames 50011..
SO VETERINARY MICROBIOLOGY, (1993 Nov) 37 (3-4) 299-317. Ref: 109
Journal code: XEW. ISSN: 0378-1135.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199406
AB Rotaviruses cause gastroenteritis in neonates of many animal species including cattle, swine, horses, dogs, cats, chickens and turkeys. Rotaviruses are nonenveloped, are about 75 nm in diameter, have a double capsid, and contain 11 double-stranded RNA segments as their genome. Several antigenically distinct groups of rotaviruses have been identified and have been alphabetically designated as A through G. Group A rotaviruses were the first group of rotaviruses isolated and are the most commonly detected rotaviruses in diarrheic animals. Group A rotaviruses have two surface proteins, VP4 and VP7, both of which are important in **serotype** determination and in inducing neutralizing antibodies and protective immunity. Multiple **serotypes** of group A **rotavirus** based on the glycoprotein VP7 (designated as G types) and based on VP4 (P types) have been identified. The immune response to rotaviruses is essentially **serotype** specific, however, cross-reactive or heterotypic epitopes have also been identified. Currently acceptable methods for immunogen quantitation include the induction of neutralizing antibody in host or laboratory animals. The in vivo efficacy of **vaccines** against **rotavirus**-associated gastroenteritis remains the standard method against which in vitro meth

in vitro quantitation of rotaviral immunogens.

L11 ANSWER 12 OF 32 MEDLINE
AN 93107260 MEDLINE
DN 93107260
TI Serotypic and genotypic characterization of human **serotype** 10 rotaviruses from asymptomatic neonates.
AU Dunn S J; Greenberg H B; Ward R L; Nakagomi O; Burns J W; Vo P T; Pax K A;
Das M; Gowda K; Rao C D
CS Department of Medicine, Stanford University, California 94305..
NC AI30346 (NIAID)
DK07056 (NIDDK)
RO1 AI21682 (NIAID)
SO JOURNAL OF CLINICAL MICROBIOLOGY, (1993 Jan) 31 (1) 165-9.
Journal code: HSH. ISSN: 0095-1137.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199303
AB Human rotaviruses were isolated from asymptomatic neonates at various hospitals and clinics in the city of Bangalore, India, and were found to be subgroup I specific and possess long RNA patterns (M. Sukumaran, K. Gowda, P. P. Malya, T. P. Srinivas, M. S. Kumar, S. Aijaz, R. R. Reddy, L.
Padilla, H. B. Greenberg, and C. D. Rao, Arch. Virol. 126:239-251, 1992). Three of these strains were adapted to tissue culture and found by **serotype** analysis and neutralization assays to be of **serotype** 10, a **serotype** commonly found in cattle but infrequently found in humans and not previously identified in neonates.
By
RNA-RNA hybridization, a high level of relatedness to a **serotype** 10 bovine **rotavirus** strain and a low-to-medium level of relatedness to a human **rotavirus** strain were observed. Since this human isolate shares a genogroup with bovine **rotavirus**, it is likely that it originated by interspecies transmission. A human **rotavirus** strain isolated from asymptomatic neonates and similar to bovine **rotavirus** might represent a good **vaccine** candidate.

L11 ANSWER 13 OF 32 MEDLINE
AN 93057392 MEDLINE
DN 93057392
TI Typing of human group A **rotavirus** with alkaline phosphatase-labeled oligonucleotide probes.
AU Sethabutr O; Hanchalay S; Leksomboon U; Bishop R F; Holmes I H; Echeverria P
CS Armed Forces Research Institute of Medical Sciences, Children's Hospital, Bangkok, Thailand..
SO JOURNAL OF MEDICAL VIROLOGY, (1992 Jul) 37 (3) 190-4.
Journal code: JMV. ISSN: 0146-6615.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199210
AB **Rotavirus** (RV) in stools of children less than 1 year of age with diarrhea in Bangkok in 1990 were **serotyped** by **monoclonal** enzyme immunoassay (MEIA). RNA extracted from these

were **serotyped** by MEIA at less than 0.001. Of 68 specimens that contained only [redacted] VP7 **serotype** (G-type), as identified by MEIA, 94 (16/17) of G1, 90 (27/30) of G2, 57 (4/7) of G3, and 36 (5/14) of G4 RV hybridized with the AP-labeled HuG1Ac, HuG2Ac, HuG3Ac, and HuG4Ac oligonucleotides, respectively. The probes for G1, 2, 3, and 4 RV were specific for each G type. The results of hybridizing specimens with 32P- and AP-labeled oligonucleotides were similar. After transcription and amplification of cDNA of gene 9, AP-labeled RV G type specific oligonucleotides hybridized with 90 (134/148) of RV specimens. The high sensitivity of these nonimmunological techniques could be of value in identifying G types of RV during **vaccine** trials.

L11 ANSWER 14 OF 32 MEDLINE
AN 92242454 MEDLINE
DN 92242454
TI Distribution of **serotypes** of human **rotavirus** in different populations.
AU Woods P A; Gentsch J; Gouvea V; Mata L; Santosham M; Bai Z S; Urasawa S; Glass R I
CS Division of Viral and Rickettsial Diseases, Centers for Disease Control, Atlanta, Georgia 30333.
SO JOURNAL OF CLINICAL MICROBIOLOGY, (1992 Apr) 30 (4) 781-5.
Journal code: HSH. ISSN: 0095-1137.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
FS Priority Journals
EM 199206
AB Serotyping is a useful tool to study the epidemiologic characteristics of rotaviruses in large populations and to assess the need for a **vaccine** to protect against all strains. By using an enzyme immunoassay with **serotype**-specific **monoclonal** antibodies to the four most common **rotavirus serotypes**, we analyzed 1,185 **rotavirus**-positive specimens from 16 stool collections in eight countries on four continents that were obtained from 1978 to 1989. Of the 926 strains (78%) that could be **serotyped**, 43% were **serotype** 1, 8% were **serotype** 2, 15% were **serotype** 3, and 7% were **serotype** 4. Twenty-two percent had insufficient numbers of double-shelled virus particles to react with the **monoclonal** antibody of the VP4 **rotavirus** protein and therefore could not be **serotyped**. Our results indicate that **vaccines** being developed must provide the greatest coverage against **serotype** 1 and that the **serotype** distribution cannot be predicted currently by the geographic area or prevalence in the preceding year.

L11 ANSWER 15 OF 32 MEDLINE
AN [illegible] MEDLINE
DN [illegible]
TI Isolation and characterization of two distinct human **rotavirus** [illegible] with [illegible] specificity.
AU [illegible] P; Tarissi A; Pinna M; Arista S; Miranda E; Bruno W H; H[illegible] Y; Flores J
CS Institute of Infectious Diseases, University of Pavia, Italy..
SO JOURNAL OF CLINICAL MICROBIOLOGY, (1992 Jan) 30 (1) 9-16.
Journal code: HSH. ISSN: 0095-1137.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
FS Priority Journals

[illegible] types

isolated 3 months apart from two children with acute gastroenteritis in Sicily, southern Italy, in the winter season of 1987 and 1988. The HRV isolates were adapted to growth in cell cultures and were then characterized by neutralization and RNA-RNA (Northern blot) hybridization.

Cross-neutralization studies with type-specific immune sera to RV **serotypes** 1 to 10 showed the antigenic relatedness of the two strains with **serotype** 6 bovine strains UK and NCDV. **Monoclonal** antibodies to VP7 of UK were able to recognize UK and NCDV strains as well as both HRV isolates. Cross-hybridization studies showed a genetic relatedness of PA151 and PA169 to bovine strains for all genes except gene 4. Gene 4 of PA151 appeared to be genetically related to

that of AU-24 (a human strain of subgroup I and with **serotype** G8 specificity that belongs to a feline genogroup), whereas gene 4 of PA169 appeared to be unique, yet it was related to gene 4 of two recently reported subgroup I HRV strains, one (BA710) with **serotype** G8 specificity and the other (HAL1271) with **serotype** G8 specificity. The new HRV strains must be taken into consideration when deciding strategies for the development of an effective RV **vaccine**.

L11 ANSWER 16 OF 32 MEDLINE
AN 92065427 MEDLINE
DN 92065427
TI Identification of VP7 epitopes associated with protection against human **rotavirus** illness or shedding in volunteers.
AU Green K Y; Kapikian A Z
CS Epidemiology Section, National Institute of Allergy and Infectious Diseases, Bethesda, Maryland 20892.
SO JOURNAL OF VIROLOGY, (1992 Jan) 66 (1) 548-53.
Journal code: KCV. ISSN: 0022-538X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199203
AB Sera from 17 of 18 adult volunteers challenged with a virulent **serotype** 1 **rotavirus** strain (D) were examined for prechallenge antibody levels against several well-defined **rotavirus** VP7 and VP4 neutralization epitopes by a competitive epitope-blocking immunoassay (EBA) in order to determine whether correlates of resistance to diarrheal illness could be identified. The presence of prechallenge serum antibody at a titer of greater than or equal to 1:20 that blocked the binding of a **serotype** 1 VP7-specific **monoclonal** antibody (designated 2G9) that maps to amino acid residue 94 in antigenic site A on the **serotype** 1 VP7 was significantly associated with resistance to illness or shedding ($P < 0.001$) or illness and shedding ($P < 0.01$) following challenge with the **serotype** 1 virus. In addition, an EBA antibody titer of greater than or equal to 1:20 to pre-challenge serum against a **serotype** 3 VP7-specific epitope defined by **monoclonal** antibody 8F4.1F6 that maps to amino acid 94 on the **serotype** 3 VP7 was also significantly associated with resistance to illness or shedding ($P = 0.02$), with a trend for protection against illness and shedding. A trend was also noted between the presence of EBA antibody against a cross-reactive VP4 epitope common to many human **rotavirus** strains, including the challenge virus, or a rhesus x human **rotavirus** strain-specific VP4 antigenic site, and resistance to illness or shedding. These data confirm that the presence

suggest' that antigenic site A on the **rotavirus** VP7, composed of amino acids 87 [redacted]6, may be involved in the formation of a major protective epitope. Further study of the role of this epitope in the development of homotypic and heterotypic immunity to rotaviruses following natural or **vaccine**-induced infection may be important in the development of strategies for control of **rotavirus** diarrheal disease.

L11 ANSWER 17 OF 32 MEDLINE
AN 91352997 MEDLINE
DN 91352997
TI Homotypic and heterotypic serum and milk antibody to **rotavirus** in normal, infected and vaccinated horses.
AU Browning G F; Chalmers R M; Sale C S; Fitzgerald T A; Snodgrass D R
CS Moredun Research Institute, Edinburgh, UK.
SO VETERINARY MICROBIOLOGY, (1991 May) 27 (3-4) 231-44.
Journal code: VEM. ISSN: 0378-1135.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
FS Priority Journals
EM 199112
AB The homotypic and heterotypic antibody response to **rotavirus** was determined in three pony mares and their foals. The normal concentrations of anti-**rotavirus** antibodies in mares' milk and mares' and foals' serum over the first 10 weeks post-partum were measured using IgA, IgG and **rotavirus** **serotype**-specific enzyme linked immunosorbent assays. Experimental infection of the foals with **serotype** 3 equine **rotavirus** produced a rapid, **serotype**-specific response which peaked 10 days after infection and a slower heterotypic response which peaked 32 days later. In contrast, vaccination of the mares with an inactivated, adjuvanted **serotype** 6 bovine **rotavirus** produced a heterotypic response similar to that of the homotypic response in both serum and milk, although the predominant response in serum was IgG, while in milk it was IgA. These results suggest that non **serotype**-restricted passive protection of foals against **rotavirus** may be achieved by parenteral vaccination of mares.

L11 ANSWER 18 OF 32 MEDLINE
AN 91244976 MEDLINE
DN 91244976
TI Antibody response to **serotype**-specific and cross-reactive neutralization epitopes on VP4 and VP7 after **rotavirus** infection or vaccination.
AU Taniguchi K; Urasawa T; Kobayashi N; Ahmed M U; Adachi N; Chiba S; Urasawa
[illegible]
[illegible]
[illegible]
[illegible]
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
FS Priority Journals
EM 199109
AB By [illegible] competitive [illegible] enzyme immunoassay with **serotype** [illegible] and [illegible] cross-neutralizing **monoclonal** antibodies

heterotypic VP7 were observed only when the individuals possessed antibodies to a **serotype** of **rotavirus** in their acute-phase or prevaccination sera.

L11 ANSWER 19 OF 32 MEDLINE
AN [illegible] MEDLINE
DN [illegible]
TI The VP8 fragment of VP4 is the rhesus **rotavirus** hemagglutinin.
AU Fiore L; Greenberg H B; Mackow E R
CS Department of Medicine, Stanford University, California 94305.
NC [illegible] (NIDDK)
[illegible]
SO VIROLOGY, (1991 Apr) 181 (2) 553-63.
Journal code: XEA. ISSN: 0042-6822.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM [illegible]
AB The amino-terminal trypsin cleavage fragment of VP4, called VP8, was expressed from a recombinant baculovirus in Sf-9 cells. The baculovirus-expressed VP8 protein is antigenically conserved as demonstrated by its recognition by a library of neutralizing **monoclonal** antibodies. In Sf-9 cell sonicates, the expressed VP8 protein is capable of agglutinating human type O erythrocytes, indicating that the functionally intact rhesus **rotavirus** viral hemagglutinin is contained in the 247-amino acid VP8 trypsin cleavage fragment. Amino acid similarities between VP8 and the amino-terminal 282 amino acids of the reovirus sigma 1 protein suggests that the sigma 1 hemagglutination function resides within these amino-terminal amino acids as well. When the expressed VP8 protein was used to immunize mice, a broadly cross-reactive neutralizing antibody response was obtained. Antibodies elicited to the expressed VP8 protein neutralized viruses of **serotypes** 1-4 and 6 but not porcine strains OSU (st5) or Gottfried (st4). The neutralizing antibody response to VP8 appeared to be more cross-reactive than the immune response to expressed VP4 or to whole RRV virion. This suggests that subunit protein immunizations may broaden the neutralizing antibody immune responses to rotaviruses and enhance protective immunity to serotypically distinct strains.

L11 ANSWER 20 OF 32 MEDLINE
AN 91180483 MEDLINE
DN 91180483
TI Electropherotypes, subgroups and **serotypes** of human **rotavirus** strains causing gastroenteritis in infants and young children in Palermo, Italy, from 1985 to 1989.
AU Arista S; Giovannelli L; Pistoia D; Cascio A; Parea M; Geraci G
CS Institute of Microbiology, University of Palermo, Italy..
SO [illegible]
[illegible]
CY [illegible]
DT [illegible]; Article; [illegible]
LA [illegible]
FS Priority Journals
EM [illegible]
AB During 1985-89, an epidemiological survey was conducted in Palermo, Sicily (Southern Italy) on group A human **rotavirus** (HRV) strains which cause gastroenteritis in infants and young children. Two hundred and [illegible] HRV [illegible] were characterized for subgroup and

[illegible] serotype [illegible]

Journal; Article; (JOURNAL ARTICLE)
MULTICENTER ST[redacted])
LA English.
FS Abridged Index Medicus Journals; Priority Journals
EM 199011
AB The first longitudinal study of group A **rotavirus** **serotype** distribution in the USA is reported. ELISAs incorporating neutralizing **monoclonal** antibodies specific for the VP7 protein of **serotypes** 1, 2, 3, and 4 were used to determine the antigenic variation of group A rotaviruses in two collections of stool specimens. Stool samples were collected from children hospitalized during 1979-1985 at Texas Children's Hospital, Houston, and from children from a more rural population hospitalized during 1981-1985 in the north-central USA. The predominant **serotype** varied from year to year in Houston, with **serotypes** 1, 3, and 4 each predominant in 1 or more years. In the north-central population only **serotype** 1 was predominant each year. Within a single **rotavirus** season in the Houston area, **serotypes** were not equally distributed by week of the season or county of residence. These differences in the distribution of **serotypes** have broad implications for the design and interpretation of **vaccine** programs.

L11 ANSWER 23 OF 32 MEDLINE
AN 91314791 MEDLINE
DN 91314791
TI Isolation in Europe of 69 M-like (**serotype** 8) human **rotavirus** strains with either subgroup I or II specificity and a long RNA electropherotype.
AU Gerna G; Sarasini A; Zentilin L; Di Matteo A; Miranda P; Parea M; Battaglia M; Milanesi G
CS Virus Laboratory, University of Pavia, Irees Policlinico S. Matteo, Italy..
SO ARCHIVES OF VIROLOGY, (1990) 112 (1-2) 27-40.
Journal code: 8L7. ISSN: 0304-8608.
CY Austria
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
FS Priority Journals; Cancer Journals
EM 199010
AB During an epidemiological study on the prevalence of human **rotavirus** (HRV) **serotypes** 1-4 in Europe, we found that some strains could not be typed. However, when a **monoclonal** antibody directed to **serotype** 8 HRV was included in the typing assay, we detected seven 69 M-like (**serotype** 8) strains, six from Finland and one from Italy. The previously reported **serotype** 8 HRV strains, 69 M, B 37, and B 38 isolated in Indonesia, were of subgroup I specificity and presented a peculiar "super short" RNA electropherotype. In contrast, all the seven European strains possessed a long RNA pattern, and one of them had subgroup II specificity. Three of these strains were adapted to growth in cell cultures and were further characterized by neutralization and by Northern blot hybridization. They appeared to be closely related to **serotype** 8 HRV strain 69 M by neutralization, but showed partial homology with several human and animal strains by hybridization. The epidemiological importance of these **serotype** 8 strains circulating in Europe should be investigated, in view of their possible inclusion in a **rotavirus** **vaccine**.

L11 ANSWER 24 OF 32 MEDLINE

Halonen P
CS Virus Laboratory, University of Pavia, Italy..
SO SCANDINAVIAN JOURNAL OF INFECTIOUS DISEASES, (1990) 22 (1) 5-10.
Journal code: UCM. ISSN: 0036-5548.
CY Sweden
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199007
AB An extended epidemiological survey on the circulation of the 4 established
human **rotavirus** (HRV) **serotypes** in some European countries was carried out in 831 fecal strains collected from infants and young children with acute non-bacterial gastroenteritis during 1981-88. Typing was done by enzyme-linked immunosorbent assay and/or solid-phase immune electron microscopy using VP7 type-specific neutralizing **monoclonal** antibodies. **Serotype** 1 HRV strains were found to be largely predominant in this period both in Italy and other countries, whereas **serotype** 4 strains were less common. The number of strains of **serotypes** 1 and 4 circulating in Europe was equivalent only in 1983-84. **Serotype** 2 strains were significantly represented only in 1981-84, while strains of **serotype** 3 were nearly absent, since only 8 strains (2 of which belonged to subgroup I) were found during the entire study period. About 13% of strains could not be typed, while 9 strains exhibited dual VP7 reactivity and 6 were non-group A HRVs. These epidemiological findings must be taken into consideration when deciding strategies for preparing **vaccines** to be used in Europe.

L11 ANSWER 15 OF 32 MEDLINE
AN 90255893 MEDLINE
DN 90255893
TI **Rotavirus serotypes** causing acute diarrhoea in hospitalized children in Yogyakarta, Indonesia during 1978-1979.
AU Bishop R F; Unicomb L E; Soenarto Y; Suwardji H; Ristanto; Barnes G L
CS Department of Gastroenterology, Royal Children's Hospital, Melbourne, Victoria, Australia..
SO ARCHIVES OF VIROLOGY, (1989) 107 (3-4) 207-13.
Journal code: 8L7. ISSN: 0304-8608.
CY Austria
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199002
AB **Rotavirus** strains in stool specimens from 111 children aged 3-24 months admitted to hospital in Yogyakarta, Indonesia for treatment of acute diarrhoea were **serotyped** using VP7 **serotype** specific **monoclonal** antibodies in a double sandwich enzyme immunoassay. A **serotype** could be assigned to 59 of 111 specimens [illegible] inability to assign a **serotype** to 47% of specimens was probably due to loss of the outer capsid during transport of specimens from Indonesia to Australia. All four major human **rotavirus** **serotypes** were detected during the 15 month survey from June 1978 to August 1979, including one **serotype** 1, 5 **serotype** 2, 31 **serotype** 3, and 21 **serotype** 4 strains. One additional strain reacted with **serotype** 3 and 4 Mabs. **Serotype** 3 strains showed intratypic variation. The relative frequency of **serotypes** 2, 3, and 4 varied during the 15 months and appeared to be influenced by climatic changes associated with dry and wet seasons. **Vaccine** strategies must take account of [illegible]

L11 ANSWER 26 OF 32 MEDLINE
AN 89340742 MEDLINE
DN 89340742
TI Determination of **rotavirus serotype**-specific antibodies in sera by competitive enhanced enzyme immunoassay.
AU Beards G M; Desselberger U
CS Regional Virus Laboratory, East Birmingham Hospital, U.K.
SO JOURNAL OF VIROLOGICAL METHODS, (1989 Apr-May) 24 (1-2) 103-10.
Journal code: HQR. ISSN: 0166-0934.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198911
AB A method is described for the specific detection of antibody to individual **rotavirus serotypes** in sera. A competitive enzyme immunoassay (EIA) was developed in which **rotavirus serotype**-specific **monoclonal** antibodies against VP7 compete with antibodies in test sera for **rotavirus serotype**-specific antigen bound to a solid phase. There was an excellent correlation between **serotype**-specific EIA results and **serotype**-specific neutralization titres ($r = 0.915$, $P = \text{less than } 0.001$). The value of this method for **rotavirus** epidemiology and **vaccine** trials is discussed.

L11 ANSWER 27 OF 32 MEDLINE
AN 88230603 MEDLINE
DN 88230603
TI Identification of cross-reactive and **serotype** 2-specific neutralization epitopes on VP3 of human **rotavirus**.
AU Taniguchi K; Maloy W L; Nishikawa K; Green K Y; Hoshino Y; Urasawa S; Kapikian A Z; Chanock R M; Gorziglia M
CS Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, Bethesda, Maryland 20892.
SO JOURNAL OF VIROLOGY, (1988 Jul) 62 (7) 2421-6.
Journal code: JCV. ISSN: 0022-538X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
OS GENBANK-M21014
EM 198809
AB The group A rotaviruses are composed of at least seven **serotypes**. **Serotype** specificity is defined mainly by an outer capsid protein, VP7. In contrast, the other surface protein, VP3 (775 amino acids), appears to be associated with both **serotype**-specific and heterotypic immunity. To identify the cross-reactive and **serotype**-specific neutralization epitopes on VP3 of human **rotavirus**, we sequenced the VP3 gene of antigenic mutants resistant to each of seven anti-VP3 neutralizing **monoclonal** antibodies (1 M36 #) which exhibited heterotypic or **serotype**-specific reactivity, and we defined three distinct neutralization epitopes on VP3. The mutants sustained single amino acid substitutions at position 305, 392, 433, or 439. Amino acid position 305 was critical to epitope I, whereas amino acid position 433 was critical to epitope III. In contrast, epitope II appeared to be dependent upon conformation and protein folding because both amino acid positions 392 and 439 appeared to be critical. These four

serotypes

suggests a mechanism of heterotypic immunity.

L.1 ANSWER 30 OF 32 MEDLINE
AN 87195841 MEDLINE
DN 87195841
TI Simple and specific enzyme immunoassay using **monoclonal** antibodies for serotyping human rotaviruses.
AU Coulson B S; Unicomb L E; Pitson G A; Bishop R F
SO JOURNAL OF CLINICAL MICROBIOLOGY, (1987 Mar) 25 (3) 509-15.
Journal code: HSH. ISSN: 0095-1137.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198708
AB An enzyme immunoassay for serotyping human rotaviruses in stools and in cell culture was developed. Hyperimmune rabbit antisera to rotaviruses were used as capture antibodies, and **rotavirus**-neutralizing mouse **monoclonal** antibodies specific for **serotypes** 1, 2, 3, and 4 were used as detection reagents. Partial purification of **monoclonal** antibodies and inclusion of skim milk powder in antibody diluents contributed to assay specificity. The sensitivity of this assay was greater than that of a direct enzyme immunoassay in which rotaviruses of the appropriate **serotype** were adsorbed directly to the solid phase. When fecal extracts were concentrated threefold, this serotyping enzyme immunoassay was of equal specificity and approached the sensitivity of electron microscopy for **rotavirus** detection. This assay is simple and rapid and is suitable for serotyping the large numbers of isolates obtained from epidemiological studies and **vaccine** trials.

L.1 ANSWER 31 OF 32 MEDLINE
AN 86210423 MEDLINE
DN 86210423
TI Passive protection against **rotavirus**-induced diarrhea by **monoclonal** antibodies to surface proteins vp3 and vp7.
AU Offit P A; Shaw R D; Greenberg H B
NC 1 R23 AI-21065-01 (NIAID)
R22 AI-21362-01 (NIAID)
SO JOURNAL OF VIROLOGY, (1986 May) 58 (2) 700-3.
Journal code: KCV. ISSN: 0022-538X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198608
AB **Monoclonal** antibodies directed against two **rotavirus** surface proteins (vp3 and vp7) as well as a **rotavirus** inner capsid protein (vp6) were tested for their ability to protect suckling mice against virulent **rotavirus** challenge. **Monoclonal** antibodies to two distinct epitopes of vp7 of simian **rotavirus** strain SA11 neutralized SA11 in vitro and passively protected suckling mice against SA11 challenge. A **monoclonal** antibody directed against vp3 of porcine **rotavirus** strain OSU neutralized three distinct **serotypes** in vitro (OSU, SA11, and UK) and passively protected suckling mice against OSU, SA11, and UK virus-induced diarrhea. The role of vp3 in eliciting protection against heterotypic **rotavirus** challenge [illegible] when [illegible] a **vaccine** with

L11 ANSWER 32 OF 32 MEDLINE
AN [redacted] ME[redacted]NE
IN [redacted]
TI Reassortant rotaviruses as potential live **rotavirus** **vaccine** candidates.
AU Midthun K; Greenberg H B; Hoshino Y; Kapikian A Z; Wyatt R G; Chanock R M
SO JOURNAL OF VIROLOGY, (1985 Mar) 53 (3) 949-54.
Journal code: KCV. ISSN: 0022-538X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198504
AB A series of reassortants was isolated from coinfection of cell cultures with a wild-type animal **rotavirus** and a "noncultivatable" human **rotavirus**. Wild-type bovine **rotavirus** (UK strain) was reassorted with human **rotavirus** strains D, DS-1, and P; wild-type rhesus **rotavirus** was reassorted with human **rotavirus** strains D and DS-1. The D, DS-1, and P strains represent human **rotavirus** **serotypes** 1, 2, and 3, respectively. Monospecific antiserum (to bovine **rotavirus**, NCDV strain) or a set of **monoclonal** antibodies to the major outer capsid neutralization glycoprotein, VP7 (of the rhesus **rotavirus**), was used to select for reassortants with human **rotavirus** neutralization specificity. This selection technique yielded many reassortants which received only the gene segment coding for the major neutralization protein from the human **rotavirus** parent, whereas the remaining genes were derived from the animal **rotavirus** parent. Single human **rotavirus** gene substitution reassortants of this sort represent potential live **vaccine** strains.

=> s polio

L12 2716 POLIO

=> s l12 and l3 and l4 and l5 and l6

L13 0 L12 AND L3 AND L4 AND L5 AND L6

=> s l12 and l3

L14 31 L12 AND L3

=> s l14 and l4

L15 1 L14 AND L4

=> s l14 1-31 ab

L16 ANSWER 1 OF 1 MEDLINE
AN [redacted]
IN [redacted]
TI Continuous cell substrate considerations.
AU [redacted]
CS [redacted]
SO [redacted]
[redacted]
[redacted]

EM 199[illegible]
AB The debate over the potential risk of tumorigenicity attributable to the use of CCL substrates for biologicals production has continued for over 30
years and may continue for some time to come. Manufacturers and regulatory
agencies are developing scientifically based guidelines for such products.
It is currently possible to follow these guidelines to prepare recombinant
biologicals and **monoclonal** antibodies in CCLs which do not pose unreasonable risks. This chapter has attempted to describe the scientific tools available to evaluate the putative risk of tumorigenicity due to potential virus DNA and protein contaminants. No theoretical or experimental basis exists to hypothesize that residual cellular protein might present a significant risk of tumorigenicity. The tools are certainly adequate for characterization of putative risks due to viruses and DNA but are not sufficiently powerful by themselves to assure product safety. The subsequent chapter on process validation describes how adequate assurances of safety ultimately can be obtained for products of CCLs against theoretical risks of tumorigenicity due to putative viruses and DNA. In addition to these safeguards, no evidence of tumorigenicity has been found in human or livestock animal recipients of the products prepared in CCL substrates. Many patients have received inoculations of tissue plasminogen activator, erythropoietin, factor VIII, soluble CD4, GM-CSF, hepatitis B surface antigen vaccine, and various **monoclonal** antibodies and other recombinant products of continuous cell lines in clinical trials. For tissue plasminogen activator, large doses of 100 mg per patient or more have been used. At the time of writing
over 11 kg of CHO-derived tissue plasminogen activator has been sold since
late 1987 for administration to over 101,000 human patients. For recombinant factor VIII, erythropoeitin, and soluble CD4 proteins, chronic
administration has been employed. Millions have received **polio** and rabies vaccines prepared in continuous **Vero** cells. In addition to this human experience, livestock animals have received annual inoculations of foot-and-mouth virus vaccine prepared in BHK-21 (a highly tumorigenic CCL) for up to 14 years without effect (69). No effects have been reported which might be attributed to oncogenic factors. Thus, scientific tools of characterization and principles of process validation are available to protect patients from putative risks of tumorigenicity associated with products prepared in CCLs. Increasing clinical experience also supports this conclusion.

[illegible]

[illegible] [illegible] MEDLINE
AU [illegible] MEDLINE
IN [illegible]
TI A microtitre plate method for isolation and typing of poliovirus using a Vero cell ELISA.
AU Samuel D; Megson B; Strang M; Appleton H
CS Enteric, Respiratory and Neurological Virus Laboratory, Central Public Health Laboratory, 61 Colindale Avenue, NW9 5HT, London, UK.
[illegible]

EM 200012
AB A simple, sensi[redacted]e, specific and rapid procedur[redacted]or isolating and typing
poliviruses is described. Specimens are inoculated onto confluent monolayers of cell lines (Hep-2C, L20B or RD) seeded into microtitre plates. After 24-48 h, the infected cells are stained with **monoclonal** antibodies specific for poliovirus types 1,2,3 or a blend of the three antibodies followed by an anti-mouse IgG-horseradish peroxidase conjugate. On addition of substrate, infected cells stain an intense blue colour and are easily distinguished from uninfected cells by light microscopy. Poliovirus infection can be detected before the appearance of cytopathic effects (CPE). This Blue-Cell ELISA test was evaluated against conventional culture and seroneutralisation on a range of **polio** isolates and clinical specimens. The sensitivity and specificity of the Blue-Cell ELISA compared to neutralisation was 100 [illegible] on culture supernatants of poliovirus isolates sent to our reference laboratory for confirmation. All the poliovirus isolates were typed within 24 h of specimen inoculation using the new method compared to
6-10 days by conventional culture and neutralisation. The method proved to
be more sensitive than conventional culture when clinical specimens were examined. Of 43 clinical specimens from which poliovirus had been previously isolated by various laboratories in the U.K., 30/43 (69.8%) were positive for poliovirus by the Blue-Cell ELISA compared to 29/43 (67.4%) by conventional culture and neutralisation. Neutralisation of specimens exhibiting CPE indicated that all of the polioviruses were correctly typed with the new method. CPE was not observed by conventional culture in any specimen that was negative in the Blue-Cell ELISA. There were no cross-reactions with a range of other enteroviruses.

L14 ANSWER 2 OF 31 MEDLINE
AN 2001224979 MEDLINE
DN 21472710
TI Molecular and antigenic characterization of a highly evolved derivative of
the type 2 oral poliovaccine strain isolated from sewage in Israel.
AU Shulman L M; Manor Y; Handsher R; Delpeyroux F; McDonough M J; Halmut T; Silberstein I; Alfandari J; Quay J; Fisher T; Robinov C; Kew O M; Crainic R; Mendelson E
CS Central Virology Laboratory, Public Health Laboratories, Chaim Sheba Medical Center, Tel-Hashomer 52621, Israel.. svlsheba@netvision.net.il
SO JOURNAL OF CLINICAL MICROBIOLOGY, (2000 Oct) 38 (10) 3729-34.
Journal code: HSH. ISSN: 0095-1137.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM [illegible]
AB [illegible] highly diverged derivative of the Sabin type 2 oral poliovirus (OPV) strain was recovered from environmental samples during a [illegible] with poliovirus. Virus was cultivated in L20B cells [illegible] in RD cells at 33 degrees C (RT [reverse transcriptase]-positive marker) to select against most OPV strains. All but 1 of 25 RT-positive OPV-derived environmental isolates were antigenically and genetically (>99.5% VP1 sequence match) similar to the respective Sabin strains. However, isolate
[illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] with Sabin.
[illegible]

[illegible] children 15 years old were significantly lower to 4568-1 geometric mean [illegible]ter [GMT], 47) than to Sabin 2 [illegible]MT, 162) or to the prototype wild strain, PV2/MEF-1/EGY42 (GMT, 108). Two key attenuating sites had also reverted in 4568-1 (A(481) to G in the 5' untranslated region and the VP1 amino acid I(143) to T), and the isolate was highly neurovirulent for transgenic mice expressing the poliovirus receptor (PVR-Tg21 mice). The extensive genetic divergence of 4568-1 from the parental Sabin 2 strain suggested that the virus had replicated in one or more people for approximately 6 years. The presence in the environment of a highly evolved, neurovirulent OPV-derived poliovirus in the absence of **polio** cases has important implications for strategies for the cessation of immunization with OPV following global **polio** eradication.

L14 ANSWER 3 OF 31 MEDLINE
AN [illegible] MEDLINE
IN [illegible]
TI Detection of mutants in **polio** vaccine viruses using pooled antipoliovirus **monoclonal** antibodies.
AU Horie H; Sato-Miyazawa M; Ota Y; Wakabayashi K; Doi T; Yoshizawa K; Doi Y;
Hashizume S
CS Japan Poliomyelitis Research Institute, Kumegawa-cho, Tokyo, 189-0003, Japan.
SO BIOLOGICALS, (1999 Sep) 27 (3) 217 24.
Journal code: AMW. ISSN: 1045-1056.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200003
EW 20000303
AB We prepared six **monoclonal** antibodies (mAbs) for type 1 polioviruses, and analysed their neutralizing specificities for use in safety tests in oral poliomyelitis vaccine (OPV) production. Pools of two or more individual mAbs showed high neutralizing activity against high-titre (approximately 10(7) CCID (50)/25 microl) of Sabin type 1 virus. It was demonstrated that the pooled mAbs can be utilized effectively in detection tests of adventitious viruses, which are among the safety tests in OPV production. Moreover, some pooled mAbs were shown to be capable of detecting very small amounts of type 1 virulent viruses and mutants in high-titre Sabin type 1 virus suspensions. Neutralizing antibody titres of these pooled mAbs decreased with increasing numbers of mutants containing neurovirulent activity in high-titre Sabin type 1 viruses which were repeatedly passaged in culture. It is expected that these pooled mAbs will contribute greatly to safety tests for OPV production. Copyright 1999 The International Association for Biologicals.

L14 ANSWER 4 OF 31 MEDLINE
AN [illegible] MEDLINE
IN [illegible]
TI Cell substrates: [illegible] [illegible] and challenges remaining.
AU [illegible]
SO DEVELOPMENTS IN BIOLOGICAL STANDARDIZATION, (1999) 102 57-63. Ref: 14
Journal code: E7V. ISSN: 0301-5149.
CY Switzerland
DT Historical
[illegible]; Article; [illegible] (JOURNAL ARTICLE)
General Review; REVIEW
[illegible]

is directly related to a series of technical advances and challenges to the status quo, some of which were accepted quickly while others took more than a decade to resolve. The development of cell culture techniques in the 1950s opened the door to the manufacture of a wide range of biological products. The first major challenge occurred in the late 1960s when human diploid cells (HDCs) were developed and proposed as an alternative to primary cell cultures for the production of live viral vaccines such as **polio**, which up to that point had been produced in primary cells of various species. In the 1970s, attention was focussed on the use of continuous cell lines (CCLs) for the production of non-replicating biological products such as interferon (IFN). The next significant technical advance and challenge was the development of recombinant DNA and **monoclonal** antibody technologies in the 1980s, both of which required the use of CCLs. Although most of the issues relating to CCLs in the manufacture of biological products have been resolved, issues related to their use as substrates for live viral vaccines remain to be fully addressed. Those experiences in the past teach us clearly that a system in which regulatory authorities, industry, and the general biomedical community cooperate in finding solutions to problems and in reaching consensus on issues raised by technical advances is ultimately in everyone's best interest. The World Health Organization has played a major role in that regard, and it should continue to provide leadership in this area.

L14 ANSWER 5 OF 31 MEDLINE
AN 1999226941 MEDLINE
DN 99226941
TI A Sabin vaccine-derived field isolate of poliovirus type 1 displaying aberrant phenotypic and genetic features, including a deletion in antigenic site 1.
AU Mulders M N; Reimerink J H; Stenvik M; Ala-addinoglu I; van der Avoort H G;
Hovi T; Koopmans M P
CS Enterovirus Laboratory, Department of Virology, National Public Health Institute (KTL), Helsinki, Finland.. Mick.Mulders@ktl.fi
SO JOURNAL OF GENERAL VIROLOGY, (1999 Apr) 80 (Pt 4) 907-16.
Journal code: I9B. ISSN: 0022-1317.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
FS Priority Journals; Cancer Journals
OS GENBANK-AF065158
EM [illegible]
EW [illegible]
AB [illegible] isolated from the oral poliovirus vaccine Sabin 1.
[illegible] differentiated it from wild type poliovirus by tests based on either immunological or genetic properties of the strains. The characteristics of a recently identified poliovirus type 1 isolate with exceptional properties is described. Initial phenotypic analysis of the virus by use of polyclonal absorbed antisera suggested a wild-type character. However, the different genomic analyses all confirmed the Sabin-derived character of the virus. All 17 plaques isolated from the strain shared these properties, thus excluding the possibility of a mixture of a wild-type

more than 99.4 [redacted] mutations were observed in regions encoding three major antigenic sites [redacted] the deduced amino acid substitutions confirmed the aberrant results of micro-neutralization assays with site-specific **monoclonal** antibodies. The most striking feature was the existence of a hexanucleotide deletion in the VP1 gene, which gave rise to a two amino acid deletion in the BC loop. In spite of these antigenic changes, the strain was readily serotyped as poliovirus type 1 under standard conditions. Likewise, replication of the virus under cell culture conditions was not affected by these mutations or by the deletion. Standard **polio** vaccination protects against this aberrant virus, and its epidemiological significance remains open.

L14 ANSWER 6 OF 31 MEDLINE
AN 1998217824 MEDLINE
DN 98217824
TI Wild poliovirus circulation among healthy children immunized with oral **polio** vaccine in Antananarivo, Madagascar.
AU Andrianarivelo M R; Rabarijaona L; Boisier P; Chezzi C; Zeller H G
CS Virology Unit, Institut Pasteur, Antananarivo, Madagascar.. mala@pasteur.mg
SO TROPICAL MEDICINE AND INTERNATIONAL HEALTH, (1998 Jan) 4 (1) 50-7. Journal code: CF5. ISSN: 1360-2276.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199807
EW 19980701
AB From July 1995 to December 1996, 3185 stool specimens from healthy children aged 6-59 months attending 6 dispensaries in the Antananarivo area were examined for poliovirus. The children had been routinely immunized according to the Expanded Programme on Immunization (EPI) schedule and received the last dose of oral **polio** vaccine (OPV) more than 1 month before stool collection. 99.4 % of the children were immunized with at least 3 doses of OPV. HEp-2 cell culture revealed virus infections in 192 stools (6.0 %), including 9 poliovirus (0.3%) and 183 nonpolio enterovirus isolates (5.7 %). Infections occurred throughout the year, but incidence was higher during the hot and rainy season (P=0.01). Using a neutralization test with **monoclonal** antibodies and PCR-RFLP in two genomic regions coding for the VP1 capsid and RNA polymerase, 4 wild polioviruses (3 type 1 and 1 type 3) and 5 vaccine-related polioviruses (2 Sabin 1-like variants, 1 Sabin 2-like and 2 Sabin 3-like) strains were identified. The wild polioviruses were isolated at the beginning and the end of the dry season. Similar RFLP patterns were observed for the 3 wild type 1 polioviruses. Comparison of partial genomic sequences in the VP1/2 A region of 1 of the wild type 1 isolates with 2 wild type strains isolated in Antananarivo in 1992 and 1993 showed a divergence of at least 1% between the strains, suggesting at least two different pathways of transmission during this period. The findings demonstrate that immunization with 3 doses of OPV did not prevent intestinal carriage of wild poliovirus strains, and that there is a risk of wild poliovirus transmission to susceptible children in the area. Multiple strategies are required to improve immunization coverage in Madagascar.

L14 ANSWER 7 OF 31 MEDLINE
AN [illegible] MEDLINE
TI [illegible]

AU B; van der Avoort H G; Hovi T; Crainic R; Simeoni P; Amato C
CS Laboratory of V[redacted]logy, Istituto Superiore di Sa[redacted]a, Rome, Italy..
    fiore@virus1.net.iss.it
SO JOURNAL OF CLINICAL MICROBIOLOGY, (1998 Jul) 36 (7) 1912-7.
    Journal code: HSH. ISSN: 0095-1137.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS GENBANK-AJ007958; GENBANK-AJ007960; GENBANK-AJ007961; GENBANK-AJ007962;
    GENBANK-AJ007963; GENBANK-AJ007964; GENBANK-AJ007965; GENBANK-AJ007966;
    GENBANK-AJ007967; GENBANK-AJ007968; GENBANK-AJ007969
EM 199812
AB Mass vaccination has led poliomyelitis to become a rare disease in a large
    part of the world, including Western Europe. However, in the past 25 years
    wild polioviruses imported from countries where **polio** is endemic
    have been responsible for outbreaks in otherwise **polio**-free
    European countries. We report on the characterization of poliovirus
    isolates from a large outbreak of poliomyelitis that occurred in Albania
    in 1996 and that also spread to the neighboring countries of Yugoslavia
    and Greece. The epidemics involved 145 subjects, mostly young adults, and
    caused persisting paralysis in 67 individuals and 16 deaths. The agent
    responsible for the outbreak was isolated from 74 patients and was
    identified as wild type 1 poliovirus by both immunological and molecular
    methods. Sequence analysis of the genome demonstrated the involvement of a
    single virus strain throughout the epidemics, and genotyping analysis
    showed 95% homology of the strain with a wild type 1 poliovirus strain
    isolated in Pakistan in 1995. Neutralization assays with both human sera
    and **monoclonal** antibodies were performed to analyze the
    antigenic structure of the epidemic strain, suggesting its peculiar
    antigenic characteristics. The presented data underline the current risks
    of outbreaks due to imported wild poliovirus and emphasize the need to
    improve vaccination efforts and also the need to implement surveillance in
    countries free of indigenous wild poliovirus.

L14 ANSWER 8 OF 91 MEDLINE
AN 98125213   MEDLINE
DN 98125213
TI Immunogenicity of trypsin treated type 2 and type 3 poliovirus in rats.
AU Kersten G F; Lantinga M; Hazendonk T; Beuvery E C
CS Department for Process and Product Development, National Institute of
    Public Health and Environmental Protection, Bilthoven, The Netherlands..
SO BIOLOGICALS, (1995 Jun) 23 (2) 179-83.
    Journal code: AMW. ISSN: 1045-1056.
CY [illegible] United Kingdom
DT [illegible]; Article; (JOURNAL ARTICLE
LA English
FS Priority Journals
EM [illegible]
AB Oral **polio** vaccine will encounter the proteolytic enzyme trypsin
    during administration but inactivated **polio** vaccine not. To
    investigate the effect on the humoral immune response, rats were immunized
    intramuscularly with trypsin treated type 2 and type 3 poliovirus. In
    addition [illegible] antibody titers

had wild-type antigenic phenotypes and, as shown by partial genomic sequencing, wild-type genotypes. Correlation of [illegible] tratory and epidemiological data suggested that residual cases of paralytic poliomyelitis in Poland between 1981 and 1990 were vaccine-related. Study of the non-paralytic cases, however, helped identify the circulation of endemic wild-type viruses in a well-vaccinated community.

L14 ANSWER 13 OF 31 MEDLINE
AN [illegible] MEDLINE
DN 92191961
TI The application of immunofluorescence and neutralization McAb tests to typing diagnosis of 286 **polio** strains.
AU Tang E
CS Institute of Medical Biology, Kunming..
SO CHUNG-KUO I HSUEH KO HSUEH YUAN HSUEH PAO ACTA ACADEMIAE MEDICINAE SINICAE, (1991 Oct) 13 (5) 367-71.
Journal code: CZS. ISSN: 1000-503X.
CY China
DT Journal; Article; (JOURNAL ARTICLE)
LA Chinese
EM 199206
AB The serum neutralization test is a classical method used for typing poliovirus. Since 1987, some type-specific non-neutralization McAb's have been obtained in our laboratory, and were used in indirect immunofluorescence staining tests to detect serotypes I, II and III. A total of 286 poliovirus strains were typed by the indirect immunofluorescence test (IF) and neutralization test (NT). The results demonstrated that both tests were in agreement, suggesting that McAb IF could replace NT as an alternative typing diagnostic method: moreover, IF was easier to perform than NT. It is economical and rapid (the results can be read within 1-2 days as compared to 7 days for NT). The reagent is very stable and can be stored for two years at 4 degrees C or for two months at 37 degrees C.

L14 ANSWER 14 OF 31 MEDLINE
AN 92101619 MEDLINE
DN 92101619
TI Development of allogenic hybridomas for production of **monoclonal** antibodies against oral **polio** vaccine strains [letter].
AU Gupta C K; Sokhey J; Gupta P K; Singh H
SO VACCINE, (1991 Nov) 9 (11) 853-4.
Journal code: X60. ISSN: 0264-410X.
CY ENGLAND: United Kingdom
DT Letter
LA English
[illegible]

L14 ANSWER 15 OF 31 MEDLINE
AU [illegible]
DN 91222491
TI Continuous cell substrate considerations.
AU [illegible]
CS SmithKline Beecham Pharmaceuticals, King of Prussia, Pennsylvania..
[illegible]
Journal code: ALI. ISSN: 0888-7470.
[illegible]

EM 199114

AB The debate over the potential risk of tumorigenicity attributable to the use of CCL substrates for biologicals production has continued for over 30 years and may continue for some time to come. Manufacturers and regulatory agencies are developing scientifically based guidelines for such products. It is currently possible to follow these guidelines to prepare recombinant biologicals and **monoclonal** antibodies in CCLs which do not pose unreasonable risks. This chapter has attempted to describe the scientific tools available to evaluate the putative risk of tumorigenicity due to potential virus DNA and protein contaminants. No theoretical or experimental basis exists to hypothesize that residual cellular protein might present a significant risk of tumorigenicity. The tools are certainly adequate for characterization of putative risks due to viruses and DNA but are not sufficiently powerful by themselves to assure product safety. The subsequent chapter on process validation describes how adequate assurances of safety ultimately can be obtained for products of CCLs against theoretical risks of tumorigenicity due to putative viruses and DNA. In addition to these safeguards, no evidence of tumorigenicity has been found in human or livestock animal recipients of the products prepared in CCL substrates. Many patients have received inoculations of tissue plasminogen activator, erythropoietin, factor VIII, soluble CD4, GM-CSF, hepatitis B surface antigen vaccine, and various **monoclonal** antibodies and other recombinant products of continuous cell lines in clinical trials. For tissue plasminogen activator, large doses of 100 mg per patient or more have been used. At the time of writing over 10 kg of CHO-derived tissue plasminogen activator has been sold since late 1987 for administration to over 100,000 human patients. For recombinant factor VIII, erythropoietin, and soluble CD4 proteins, chronic administration has been employed. Millions have received **polio** and rabies vaccines prepared in continuous Vero cells. In addition to this human experience, livestock animals have received annual inoculations of foot-and-mouth virus vaccine prepared in BHK-21 (a highly tumorigenic CCL) for up to 14 years without effect (69). No effects have been reported which might be attributed to oncogenic factors. Thus, scientific tools of characterization and principles of process validation are available to protect patients from putative risks of tumorigenicity associated with products prepared in CCLs. Increasing clinical experience also supports this conclusion.

L4 ANSWER 4 OF 4 MEDLINE

AN [illegible] MEDLINE

DN [illegible]

TI The TraT lipoprotein as a vehicle for the transport of foreign antigenic determinants to the cell surface of Escherichia coli K12: structure-function relationships in the TraT protein.

AU Taylor I M; Harrison J L; Timmis K N; O'Connor C D

CS Department of Biochemistry, University of Southampton, UK.

SO MOLECULAR MICROBIOLOGY, (1990 Aug) 4 (8) 1259-68.

Journal code: MOM. ISSN: 0950-382X.

CY [illegible]: United Kingdom

The structure and function of the TraT protein determined by plasmid R6-5 was probed by genetic insertion of a foreign antigenic determinant, the C3 epitope of **polio** virus, at residues 61, 125, 180, 200 or 216 of the protein. The chimaeric proteins were transported to the outer membrane and, in three cases, immunoassays with an anti-C3 **monoclonal** antibody indicated that the C3 epitope was exposed on the cell surface. Three of the hybrids, with insertions at residues 125, 180 and 200, assembled into the trypsin-resistant oligomeric form characteristic of the wild-type protein, which suggested that these regions are not involved in TraT subunit:subunit interactions. Additionally, the hybrid protein carrying the C3 epitope at position 180 functioned in a genetic suppression assay and retained partial surface-exclusion activity. Thus, its localization, folding and organization does not appear to be grossly altered from that of the wild-type protein. Applications of the protein for the transport of foreign antigenic determinants to the cell surface are discussed.

L14 ANSWER 17 OF 31 MEDLINE
AN 90385514 MEDLINE
DN 90385514
TI Creation of targets for proteolytic cleavage in the LamB protein of E coli K12 by genetic insertion of foreign sequences: implications for topological studies.
AU Ronco C; Charbit A; Hofnung M
CS Unite de Programmation Moleculaire et Toxicologie Genetique, CNRS UA271 INSERM U163, Institut Pasteur, Paris, France..
SO BIOCHIMIE, (1990 Feb-Mar) 72 (2-3) 183-9.
Journal code: A14. ISSN: 0300-9084.
CY France
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199011
AB LamB, an integral outer membrane protein of E coli K12, is highly resistant to protease digestion. We had previously genetically inserted a foreign sequence corresponding to an epitope from the poliovirus next to amino acids 146, 153, 186, and 374 of LamB. In 3 cases (sites 146, 153, 374), insertion of the foreign peptide did not extensively affect the functions of LamB (and therefore folding). In 2 cases (sites 146 and 374) the **polio** virus epitope was detectable on the bacterial surface with a specific **monoclonal** antibody. We show here that the 4 modified proteins are sensitive to trypsin, including on intact cells. The sizes of the major cleavage products is that expected for proteolysis at sites located in the sequences inserted. In 1 case (site 374), this was directly demonstrated by protein sequencing. The results confirm the cell surface exposure of the region of residues 146 and 374 and provide information on the regions around residues 146 and 374. Perspectives and limitations of this approach for fine studies on the mode of insertion of membrane proteins are briefly discussed.

L14 ANSWER 18 OF 31 MEDLINE
AN [illegible] MEDLINE
DN [illegible]

Journal code: JP[redacted] ISSN: 0022-3050.
CY ENGLAND: United [redacted]ngdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199011
AB In patients with prior **polio** there was an excessive use of remaining motor units and an absence of type II muscle fibres in the tibialis anterior (TA). In the present study, eight subjects with prior **polio** with more than 9[redacted] type I fibres in the TA were examined. The aim was to elucidate whether the lack of type II muscle fibres was due to a selective loss of motoneurons with high threshold and high axonal conduction velocity or due to a muscle fibre transition from type II to type I. There was no decrease of the proportion of motoneurons with high threshold and high axonal conduction velocity. **Monoclonal** antibodies against fast and slow myosin heavy chains (MHC) were used as histochemical markers and many muscle fibres of type I according to ATPase stainability showed a binding of both anti-fast and anti-slow MHC. It is suggested that the type I muscle fibre dominance in prior **polio** subjects with excessive use of TA during walking is due to a muscle fibre transition from type II to type I and not to a loss of one class of motor units.

L14 ANSWER 19 OF 31 MEDLINE
AN 89031579 MEDLINE
DN 89031579
TI The concept and operational definition of protein epitopes.
AU Van Regenmortel M H
CS Institut de Biologie Moleculaire et Cellulaire, Strasbourg, France.
SO PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY OF LONDON. SERIES B: BIOLOGICAL SCIENCES, (1989 Jun 12) 323 (1217) 451-66. Ref: 98
Journal code: BSB. ISSN: 0962-8436.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, ACADEMIC)
LA English
FS Priority Journals
EM 198911
AB The antigenic determinants or epitopes of a protein correspond to those parts of the molecule that are specifically recognized by the binding sites or paratopes of certain immunoglobulin molecules. Epitopes are thus relational entities that require complementary paratopes for their operational recognition. Some authors consider that the concept of epitope necessarily involves the two properties of antigenic reactivity (ability to bind to a paratope) and immunogenicity (ability to induce an immune response). But a view creates difficulties because it makes the definition of epitopes in a protein depend on immunogenetic and regulatory mechanisms of the immunized host. The delineation of epitopes can be achieved by antigenic cross-reactivity studies or by X-ray crystallography. Both approaches require specific criteria for deciding which residues of the antigen are in contact with the paratope and are functionally part of the epitope. The relative contribution of static accessibility, segmental mobility and induced fit to immune interaction remains controversial.

different **monoclonal** antibodies that can be raised against it, the delineation of epitopes corresponds to the situation in various hosts of the immune repertoire specific for the antigen. Neutralization epitopes are a special subclass of the epitopes of infectious agents and toxins that are specifically recognized by antibody molecules able to neutralize the biological activity of the antigen. The identification of neutralization epitopes is important for the development of synthetic vaccines because it is this type of epitope that should be mimicked by synthesis and used as a vaccine for eliciting protective immunity. The first demonstration that synthetic peptides could elicit antibodies that neutralized viral infectivity was made by Anderer and his colleagues in the 1960s in their work with tobacco mosaic virus. Nearly 20 years passed before it was shown that antibodies to synthetic peptides were also able to neutralize the infectivity of other viruses such as foot-and-mouth disease, **polio** and hepatitis B viruses.

L14 ANSWER 20 OF 31 MEDLINE
AN [redacted]2 MEDLINE
DN [redacted]2
TI An engineered poliovirus chimaera elicits broadly reactive HIV-1 neutralizing antibodies.
AU Evans D J; McKeating J; Meredith J M; Burke K L; Katrak K; John A; Ferguson M; Minor P D; Weiss R A; Almond J W
CS Department of Microbiology, University of Reading, UK.
SO NATURE, (1989 Jun 1) 339 (6223) 385-8, 340.
Journal code: NSC. ISSN: 0028-0836.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199909
AB The Sabin type 1 vaccine strain of poliovirus is probably the safest and most successful live-attenuated vaccine virus used in humans. Its widespread use since the early 1960s has contributed significantly to the virtual eradication of poliomyelitis in developed countries. We have reported previously the construction of an intertypic antigen chimaera of poliovirus, based on the Sabin 1 strain, and proposed that this virus could be modified to express on its surface antigenic determinants from other pathogens. We describe here the construction and characterization of a poliovirus antigen chimaera containing an epitope from the transmembrane glycoprotein (gp41) of human immunodeficiency virus type 1 (HIV-1). In antibody absorption experiments, the virus chimaera inhibited neutralization of HIV-1 by antipeptide **monoclonal** antibodies specific for the gp41 epitope and significantly reduced the group specific neutralizing activity of HIV-1-positive human sera. Rabbit antisera raised by [illegible] of the **polio**/HIV chimaera in adjuvant were shown to be specific for HIV-1 gp41 in peptide-binding assays and by Western blotting. Moreover, the antisera neutralized a wide range of American and African HIV-1 isolates and also inhibited virus-induced cell fusion. **Monoclonal** antibodies against the HIV-1 derived regions of the chimaera also neutralized HIV-1. These results establish the potential of using poliovirus for the presentation of foreign antigens and suggest that Sabin 1 poliovirus/HIV chimaeras could offer an approach to

carrying a poliovirus immunogen.
AU Delpeyroux F; [redacted] Blondel B; Horaud F; [redacted] Van der Werf S; Girard M; Lagarde D; Mazert M C; Streeck R E
CS Virologie Medicale, Institut Pasteur, Paris, France.
SO BIOCHIMIE, (1988 Aug) 70 (8) 1065-73.
Journal code: A14. ISSN: 0300-9084.
CY France
DT Journal; Article; JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198900
AB The hepatitis B surface antigen (HBsAg) has the unique property of assembling with cellular lipids into spherical or elongated particles of 22 nm diameter which are secreted by mammalian cells expressing HBsAg. We have studied the structural requirements for particle formation and secretion by creating in phase insertions into different regions of the S gene of the hepatitis B virus, coding for HBsAg. Modified genes were integrated into an appropriate vector and expressed in mouse L cells. Various single and double inserts in the two major hydrophilic domains of HBsAg were compatible with particle synthesis and secretion. The level of secretion was influenced by the length of the insert, its primary structure, and the site of insertion into the HBsAg molecule. One of the inserted sequences was a synthetic DNA fragment encoding a continuous type
1 poliovirus neutralization epitope (the C3 epitope). Mammalian cells expressing the modified hepatitis B virus S gene secreted hybrid particles
carrying the poliovirus antigen. The hybrid **polio**-HBsAg particles reacted with a **monoclonal** antibody specific for the C3 epitope and induced poliovirus neutralizing antibodies at low, but significant, titers in mice and at high titers in rabbits. However, the immune response to HBsAg was weaker to hybrid particles than to unmodified
HBsAg particles. By cotransfection with two different plasmids carrying either modified or unmodified genes, we obtained phenotypically mixed particles containing both **polio**-HBsAg and HBsAg molecules. Inoculated into rabbits, the mixed particles induced high antibody titers against both poliovirus and HBsAg.

L14 ANSWER 22 OF 31 MEDLINE
AN 89077814 MEDLINE
DN 89077814
TI Structural and antigenic variation of the structural protein VP3 in serotype 1 poliovirus isolated from vaccinees.
AU Cash P
CS Department of Bacteriology, University of Aberdeen, Foresterhill, Scotland.
SO [illegible] JOURNAL OF MICROBIOLOGY, (1988 Jun) 34 (6) 892-6.
Journal code: [illegible]. ISSN: [illegible].
CY [illegible]
DT [illegible]; Article; [illegible] ARTICLE
LA English
FS Priority Journals
EM 198904
AB High resolution two-dimensional PAGE was used to analyse protein variation
among serotype 1 poliovirus isolates. Viruses isolated from patients with recent histories of vaccination with live attenuated poliovirus were compared with prototype serotype 1 poliovirus. The nonvaccine Mahoney [illegible]

poli[illegible]

acidic VP3 similar to the nonvaccine type 1 strains. The altered VP3 mobility correlated with a change in antigenicity as determined by **monoclonal** antibodies directed to the neutralization site located on VP3. The data clearly illustrated the suitability of two-dimensional PAGE in analysing protein mutations in attenuated vaccine virus excreted by vaccinees.

L14 ANSWER 23 OF 31 MEDLINE
AN 86160967 MEDLINE
DN 86160967
TI Role of the LFA-1 molecule in cellular interactions required for antibody production in humans.
AU Fischer A; Durandy A; Sterkers G; Griscelli C
SO JOURNAL OF IMMUNOLOGY, (1986 May 1) 136 (9) 3198-203.
Journal code: IPB. ISSN: 0022-1767.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 198617
AB The lymphocyte function-associated antigen 1 (LFA-1) has been shown to play a role in various T cell functions in mice and humans including cytotoxicity, and proliferation to allogeneic cells and foreign antigens. These functions have been defined with specific **monoclonal** antibodies and were additionally confirmed by the investigation of patients with inherited deficiency in membrane LFA-1 expression. In this paper, we report our studies on the potential role of the LFA-1 molecule in T lymphocyte-dependent antibody responses. In a patient with a complete lack of membrane expression of LFA-1, there was no in vivo antibody response to vaccinal antigens such as tetanus, diphtheria toxoids, and **polio** virus, and no in vivo or in vitro antibody production to influenza virus, whereas serum immunoglobulin levels and antibodies to polysaccharides (isohemagglutinins, antibody to mannan, and a polysaccharide from Candida albicans) were detected in correlation with in vitro production of anti-mannan antibody. The defective antibody response to polypeptides was not secondary to poor antigen-specific T proliferation, because the latter was found to be present. Similarly, in vitro antibody production to influenza virus of normal cells was blocked by several anti LFA-1 **monoclonal** antibodies specific for the alpha subunit of the molecule, if they were added from the beginning of the culture. The antibody production blockade could be achieved with **monoclonal** antibody concentrations that partially preserved T cell proliferation. The helper effect of an influenza virus-specific helper T cell clone was also blocked. The targets of the blockade were shown by incubation experiments to be T cells and monocytes. In contrast, anti LFA-1 **monoclonal** antibodies had no effect on pokeweed [illegible] cell [illegible] and anti mannan antibody production. These combined data demonstrate that the LFA-1 molecule plays a role in T cell dependent antibody production to polypeptidic antigens but not in the antibody response to polysaccharides, although the antibody response to mannan is T cell dependent. It is proposed that the LFA-1 molecule is required to some extent for a antigen-presenting cells-T lymphocyte interaction and for the maintenance of a close association between antigen-specific helper T cell [illegible]

AN [illegible] MEDLINE
DN [illegible]
TI Hit-and-run neutralization of poliovirus.
AU Brioen P; Pomkaut B; Boeye A
SO JOURNAL OF GENERAL VIROLOGY, (1985 Nov) 66 (Pt 11) 2495-9.
Journal code: JPB. ISSN: 0022-1317.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198602
AB At physiological ionic strength, **monoclonal** antibody 35-1f4 has previously been shown to neutralize poliovirus type 1 by antibody-mediated polymerization. At low ionic strength, this antibody neutralized the virus by a hit-and-run mechanism: the virions were converted to non-infectious, empty capsids devoid of antibodies. These empty capsids resembled those formed by thermal denaturation of native **polio** virions in their sedimentation coefficient (80S), antigenicity (H) and isoelectric pH (5.8).

L14 ANSWER 27 OF 31 MEDLINE
AN 86081307 MEDLINE
DN 86081307
TI Nuclear localization of poliovirus capsid polypeptide VP1 expressed as a fusion protein with SV40-VP1.
AU Wychowski C; van der Werf S; Girard M
SO GENE, (1985) 37 (1-3) 63-71.
Journal code: FOP. ISSN: 0378-1119.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198601
AB The poliovirus cDNA fragment coding for capsid polypeptide VP1 was inserted between the EcoRI and BamHI sites of SV40 DNA, generating a chimaeric gene in which the sequence of the 302 amino acids (aa) of poliovirus capsid polypeptide VP1 was placed downstream from that of the 94 N-terminal aa of SV40 capsid polypeptide VP1. The resulting defective, hybrid virus, SV40-delta 1 **polio**, was propagated in CV1 cells using an early SV40 mutant, am404, as a helper. Cells doubly infected by SV40-delta 1 **polio** and am404 expressed a 50-kDal fusion protein which was specifically immunoprecipitated by polyclonal and/or **monoclonal** antibodies raised against poliovirus capsids or against poliovirus polypeptide VP1. Examination of the infected cells by immunofluorescence after staining with anti-poliovirus VP1 immune sera revealed that the fusion protein was mostly located in the intra- and perinuclear space of the cells, in contrast to the exclusively intracytoplasmic location of genuine poliovirus VP1 polypeptide that was found in poliovirus infected cells. This suggests that the N-terminal part of the SV40-VP1 polypeptide could contain an important sequence element acting as a migration signal for the transport of proteins from the cytoplasm to the nucleus.

L14 ANSWER 26 OF 31 MEDLINE
AN [illegible] MEDLINE
DN [illegible]
TI [illegible]

PT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LA English
FS Priority Journals
EM 198507
AB This article summarizes recent work on the determinants of antigenicity
in
poliovirus type 3 and reports on experiments in progress aimed at
understanding the molecular basis of attenuation in Sabin's type 3
vaccines. Ways in which this new information might be used to produce
alternative, safe, inexpensive, multivalent vaccines against **polio**
and other enteroviruses are discussed.

L14 ANSWER 27 OF 31 MEDLINE
AN 85124790 MEDLINE
DN 85124790
TI Establishment of 25 hybridomas secreting **monoclonal** antibodies
against type 1 **polio** viruses (Sabin strain) and their
application in antigenic analysis.
AU Gu F Z; Mu G F; Wang Y A
SO CHUNG-KUO I HSUEH KO HSUEH YUAN HSUEH PAO ACTA ACADEMIAE MEDICINAE
SINICAE, (1984 Jun) 6 (3) 157-61.
Journal code: C2S. ISSN: 1000-503X.
CY China
DT Journal; Article; (JOURNAL ARTICLE)
LA Chinese
EM 198508

L14 ANSWER 28 OF 31 MEDLINE
AN 85081327 MEDLINE
DN 85081327
TI Induction of neutralizing antibody in mice against poliovirus type II
with
monoclonal anti-idiotypic antibody.
AU Uytdehaag F G; Osterhaus A D
SO JOURNAL OF IMMUNOLOGY, (1985 Feb) 134 (2) 1225-9.
Journal code: IFB. ISSN: 0022-1767.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 198504
AB Syngeneic **monoclonal** anti-idiotype antibody Ab2,2-17C3SCC was
raised against an idiotope on a protective **monoclonal** antibody
with specificity for poliovirus type II. Ab2,2-17C3SCC detects a
paratope-related interspecies IdX. Ab2,2-17C3SCC purified from
supernatant
[illegible] hybridoma cells by protein A-Sepharose was injected into 4- to
[illegible] BALB/c mice. The sera of the mice were screened for the
induction of antibodies bearing the corresponding idiotope. Immunization
[illegible] with Ab2,2-17C3SCC induced antibodies of complementary
specificity. Furthermore, micro-VN tests suggest that Ab2,2-17C3SCC can
substitute for antigen in the induction of anti **polio**
neutralizing antibodies, and hence can function as a **monoclonal**
anti-idiotypic vaccine.

L14 ANSWER 29 OF 31 MEDLINE
AN [illegible] MEDLINE
DN [illegible]
[illegible] monoclonal

antibody responses in all of the convalescent sera of patients with DF and
DHF. Similar NS1-specific isotypic and serotypic antibody responses were
found in the sera from DF and DHF patients. The results showed that all
DEN infections induced significant NS1-specific IgG, whereas 75% and 60%
of primary DF patients vs. 40% and 90% of secondary DF patients produced
IgM and IgA antibodies, respectively. Specificity analysis showed that DEN
NS1-specific IgG and IgA antibodies cross-react strongly to Japanese
encephalitis (JE) virus NS1 glycoprotein, whereas DEN NS1-specific IgM
antibodies do not cross-react to JE virus NS1 glycoprotein at all. The
serotype specificity of NS1-specific IgM, IgA and IgG were found to be
81%, 67% and 75% for primary infections, and 50%, 22% and 30% for
secondary infections in positive samples of DF patients. Similar pattern
was found in DHF patients. The results showed that all of the DF and DHF
patients produced significant NS1-specific antibodies. We did not observe
direct correlation between the anti-NS1 antibody responses and DHF because
sera from patients with DF and DHF showed similar anti-NS1 antibody
responses. Copyright 2000 Wiley-Liss, Inc.

L17 ANSWER 2 OF 25 MEDLINE
AN 2000345091 MEDLINE
DN 20345091
TI Isolation and partial characterization of **dengue** virus type 2
and 4 strains from **dengue** fever and **dengue**
haemorrhagic fever patients from Mindanao, Republic of the Philippines.
AU ter Meulen J; Grau M; Lenz O; Emmerich P; Schmitz H; Oh F; Gaspert R;
Niedrig M
CS Department of Virology, Bernhard Nocht Institute for Tropical Medicine,
Hamburg, Germany.. termeulen@bni.uni-hamburg.de
SO TROPICAL MEDICINE AND INTERNATIONAL HEALTH, (2000 May) 5 (5) 325-9.
Journal code: CF5. ISSN: 1360-2276.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200009
EW 20000904
AB OBJECTIVE: Isolation of **dengue** virus from **dengue** fever
and **dengue** haemorrhagic fever cases from Mindanao, Republic of
the Philippines. METHODS: 12 patients with clinically suspected
dengue fever (DF) or **dengue** haemorrhagic fever (DHF)
presenting in four regional hospitals between August and September 1995 on
Mindanao were enrolled in the study. **Dengue** virus was isolated
by inoculation of **Vero**/E6 or C6/36 cells with patient serum. IgM
[illegible] were detected using a commercial test system. Up to 454 bp [illegible]
[illegible] of the E/NS1 gene junction of different [illegible]
[illegible] were sequenced and phylogenetically analysed. RESULTS: Virus
could be isolated from seven patients, five isolates were typed as
dengue virus type 2 and two as **dengue** virus type 4 by
immunostaining with **monoclonal** antibodies or by RT/PCR.
Phylogenetic analysis confirmed a close relationship of the **dengue**
virus type 2 isolates with viruses isolated in the Philippines in 1998
and [illegible]. CONCLUSION: As observed in studies from other parts of South East
Asia, **dengue** virus type 2 was readily isolated from [illegible]
Dengue [illegible]

AN 2000164671
TI An antigen capt[redacted] enzyme-linked immunosorbent a[redacted]y reveals high levels of the **dengue** virus protein NS1 in the sera of infected patients.
AU Young P R; Hilditch P A; Bletchly C; Halloran W
CS Sir Albert Sakzewski Virus Research Centre, The Royal Children's Hospital, Herston, Brisbane 4029, Australia.. p.young@mailbox.uq.edu.au
SO JOURNAL OF CLINICAL MICROBIOLOGY, (2000 Mar) 38 (3) 1053-7. Journal code: HSH. ISSN: 0095-1137.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200006
EW 20000602
AB We describe the development of a capture enzyme-linked immunosorbent assay for the detection of the **dengue** virus nonstructural protein NS1. The assay employs rabbit polyclonal and **monoclonal** antibodies as the capture and detection antibodies, respectively. Immunoaffinity-purified NS1 derived from **dengue** 2 virus-infected cells was used as a standard to establish a detection sensitivity of approximately 4 ng/ml for an assay employing **monoclonal** antibodies recognizing a **dengue** 2 serotype-specific epitope. A number of serotype cross-reactive **monoclonal** antibodies were also shown to be suitable probes for the detection of NS1 expressed by the remaining three **dengue** virus serotypes. Examination of clinical samples demonstrated that the assay was able to detect NS1 with minimal interference from serum components at the test dilutions routinely used, suggesting that it could form the basis of a useful additional diagnostic test for **dengue** virus infection. Furthermore, quantitation of NS1 levels in patient sera may prove to be a valuable surrogate marker for viremia. Surprisingly high levels of NS1, as much as 15 microg/ml, were found in acute-phase sera taken from some of the patients experiencing serologically confirmed **dengue** 2 virus secondary infections but was not detected in the convalescent sera of these patients. In contrast, NS1 could not be detected in either acute-phase or convalescent serum samples taken from patients with serologically confirmed primary infection. The presence of high levels of secreted NS1 in the sera of patients experiencing secondary **dengue** virus infections, and in the context of an anamnestic antibody response, suggests that NS1 may contribute significantly to the formation of the circulating immune complexes that are suspected to play an important role in the pathogenesis of severe **dengue** disease.

AN ANSWER 4 OF 29 MEDLINE
AN [redacted] MEDLINE
TI [redacted]
TI Acute renal failure with neurological involvement in adults associated with measles virus infection.
AU Wairagkar N S; Gandhi B V; Katrak S M; Shaikh M I; Parikh P R; Wadia N H; Sadhwani D A
CS National Institute of Virology, Pune, India.. ccmmniv@icmrniv.ren.nic.in
SO LANCET, (1988 Sep 17) 2 (8613) 662-5. Journal code: [redacted]. ISSN: [redacted].
CY [redacted]: United Kingdom
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failure with neurological involvement of unknown cause were admitted to a hospital in Mumbai, India. We describe clinical presentations and investigations of the cause. METHODS: We analysed case reports and laboratory findings for the patients (age 37-43 years, two men, one woman) that were provided by the clinicians in charge. Serum and cerebrospinal fluid were tested for viral cause by IgM ELISA to Japanese encephalitis, West Nile fever, **dengue**, and measles. Samples were inoculated in **vero**-cell culture for virus isolation. The virus isolates were confirmed with indirect immunofluorescence with antimeasles immune sera and mouse **monoclonal** antibodies to measles HA and F proteins and with neutralisation tests using antimeasles immune sera. FINDINGS: Clinical features were fever, vomiting, oliguria or anuria, bilateral facial weakness, impaired hearing, blindness, proximal and distal areflexic limb paralysis, and respiratory paralysis. No patient had a macropapular rash. Blood urea nitrogen (4.64-27.8 mmol/L) and creatinine (401.1-1105.0 micromol/L) were high, and cerebrospinal fluid contained high concentrations of proteins and pleocytosis. Kidney biopsy samples in two patients showed severe interstitial nephritis. IgM antibodies to measles were found in blood and cerebrospinal fluid. **Vero**-cell cultures from serum and cerebrospinal fluid of one patient and cerebrospinal fluid of two patients, showed cytopathic effects characteristic of measles. INTERPRETATION: Unusual manifestations of acute renal failure with neurological involvement associated with measles virus in adults presenting without rash was confirmed. Our findings may affect the development of measles-elimination programmes.

L17 ANSWER 5 OF 23 MEDLINE
AN 1998091941 MEDLINE
DN 98091941
TI First record in America of Aedes albopictus naturally infected with **dengue** virus during the 1995 outbreak at Reynosa, Mexico.
AU Ibanez-Bernal S; Briseno B; Mutebi J P; Argot E; Rodriguez G; Martinez-Campos C; Paz R; de la Fuente-San Roman P; Tapia-Conyer R; Flisser A
CS Entomology Department, INDRE, Mexico, D.F. Mexico.
SO MEDICAL AND VETERINARY ENTOMOLOGY, (1997 Oct) 11 (4) 305-9. Journal code: A9D. ISSN: 0269-283X.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199803
EW 19980302
AB Mosquito collections were conducted during a **dengue** outbreak in [illegible], Tamaulipas, Mexico, July-December 1995. A total of 6694 adult [illegible] of 11 species and nine species were obtained, of which 2997 (44.7%) females and 1.7% males were Aedes albopictus and 2949 (44.0%) females and 0.7% males were Ae.aegypti. These two species comprised 88.8% of the total collection. Specimens were grouped into pools, mainly [illegible] of them processed for detection of virus by cytopathic effect in C6/36 and **VERO** cell cultures and by haemagglutination test. Five pools gave positive haemagglutination reactions and were examined by immunofluorescence using **monoclonal** antibodies to flaviviruses and to **dengue** virus. One pool of ten Ae.albopictus males was positive for **dengue** virus: serotypes 2 and 3 were identified by [illegible] **monoclonal** antibodies and confirmed by RT-PCR. [illegible] infected with

AN 97042246 MEDLINE
DN 97042246
TI **Dengue** 1 virus binding to human hepatoma HepG2 and simian **Vero** cell surfaces differs.
AU Marianneau P; Megret F; Olivier R; Morens D M; Deubel V
CS Institut Pasteur, Unite des Arbovirus et Virus des Fievres Hemorragiques, Paris, France.
SO JOURNAL OF GENERAL VIROLOGY, (1996 Oct) 77 (Pt 10) 2547-54. Journal code: I9B. ISSN: 0022-1317.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
FS Priority Journals; Cancer Journals
EM 199612
EW 19961204
AB We analysed the binding and infectivity of **dengue** virus serotype 1 (DEN-1) for the human hepatoma cell line HepG2 in comparison with the simian kidney cell line **Vero**. The higher susceptibility of **Vero** cells to DEN-1 correlated with greater binding affinity of DEN-1 to these cells. In contrast, the capacity of virus attachment was higher for HepG2 than for **Vero** cells. Profiles of DEN-1 binding at different pH were markedly different between the two cell types. A type-specific neutralizing **monoclonal** antibody reduced initial virus binding to both cell types similarly but complex and group-specific neutralizing antibodies affected virus adhesion differently. Altogether, these results suggest the involvement of different receptors or receptors presented in a different environment on the cell surface in the two cell lines. The sensitivity to proteolytic enzymes and to ionic detergent of the binding sites on the two cell types was tested and results indicated that they may be multimeric proteins or protein complexes.

L17 ANSWER 7 OF 29 MEDLINE
AN 96088348 MEDLINE
DN 96088348
TI Detection of **dengue** viral RNA by microplate hybridization.
AU Ruiz B H; Zamora M P; Liu S
CS Department of Molecular Biology, National University of Mexico, Ciudad Universitaria, Mexico, D.F.
SO JOURNAL OF VIROLOGICAL METHODS, (1995 Aug) 54 (2-3) 97-108. Journal code: HQR. ISSN: 0166-0934.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
FS Priority Journals
EM 199604
AB **Dengue** virus infection is a major public health problem throughout tropical countries. In endemic areas, **dengue** hemorrhagic fever (DHF) / **dengue** shock syndrome (DSS) are major causes of hospitalizing or death. However, serological confirmation of **dengue**-related illness is often complicated and time-consuming. Detection of **dengue** viruses in clinical or field samples usually depends on virus isolation in susceptible cell lines or in mosquitoes, followed by viral protein identification using polyclonal or **monoclonal** antibodies. The increasing incidence of **dengue** virus infections has prompted increased efforts to develop rapid and

encephalitis (JE) virus from different geographic locations was compared. One strain, isolated from Beijing (JE-Bei), did not fuse AP-61 cells after replication (fusion from within; FFWI), whereas all other strains fused these cells by 72 h post-infection. JE-Bei also readily established a non-cytolytic persistent infection in AP-61 cells. Differences in the envelope proteins of fusogenic and non-fusogenic virus were detected by haemagglutination-inhibition tests and by antigenic analysis using **monoclonal** antibodies. Yields of infectious virus in either AP-61 or **Vero** cell cultures were similar if JE-Bei was compared with the fusogenic strain (JE-Sar) but yields of haemagglutinin were 50-100 fold higher with the non-fusogenic virus, implying excessive generation of non-infectious particles. When added directly to AP-61 cell monolayers at pH6, only JE-Bei produced significant fusion from without (FFWO) presumably reflecting the larger quantity of antigen. Cell monolayers persistently infected with JE-Bei or monolayers treated with UV-inactivated JE-Bei, were resistant to superinfection with JE, West Nile and **dengue** 2 viruses but were susceptible to infection with the alphavirus Sindbis. When administered intracerebrally (I/C) to newborn and weanling mice, the viruses were equally neurovirulent. However, fusogenic JE-Sar was significantly more neurovirulent than JE-Bei for weanling mice after intraperitoneal (I/P) or subcutaneous (S/C) inoculation. Mice given non-fusogenic JE-Bei, resisted the peritoneal challenge with fusogenic JE-Sar, and West Nile but not Semliki Forest virus when given 6 h after the first virus. The potential significance of cell fusion by JE virus and interference through over production of non-infectious virus, is discussed in the context of JE virus virulence.

L17 ANSWER 14 OF 23 MEDLINE
AN 91202134 MEDLINE
DN 91202134
TI Production of dimer-specific and **dengue** virus group cross-reactive mouse **monoclonal** antibodies to the **dengue** 2 virus non-structural glycoprotein NS1.
AU Falconar A K; Young P R
CS Wolfson Molecular Biology Unit, London School of Hygiene & Tropical Medicine, U.K.
SO JOURNAL OF GENERAL VIROLOGY, (1991 Apr) 72 (Pt 4) 961-5.
Journal code: I9B. ISSN: 0022-1317.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199106
AB A panel of mouse **monoclonal** antibodies (MAbs) raised against the [illegible] glycoprotein NS1 of **dengue** 2 virus (PR159) was studied for cross-reactivity with the NS1 protein of other **dengue** virus serotypes and other members of the Flaviviridae using immunoblotting. Most of the 35 anti-NS1 MAbs were found to be specific for **dengue** 2 virus NS1 (some of which were specific for the native, dimeric form of this protein), but others were found to cross-react within the **dengue** virus group. This latter group of MAbs, although [illegible] by MAbs defining a **dengue** 2 and 4 virus subgroup, also

not necessary; (2) synthetic oligonucleotide for the probe is not needed; (3) the time required for washing of the solid phase is greatly reduced; and (4) baking is eliminated. The results show that this procedure is sensitive, rapid and easy to perform.

L17 ANSWER 8 OF 23 MEDLINE
AN 96096[illegible] MEDLINE
DN 96096[illegible]
TI Antibody-enhanced binding of **dengue**-2 virus to human platelets.
AU Wang S; He R; Patarapotikul J; Innis B L; Anderson R
CS Department of Microbiology and Immunology, Dalhousie University, Halifax, Nova Scotia, Canada..
SO VIROLOGY, (1995 Oct 20) 213 (1) 254-7.
Journal code: XEA. ISSN: 0042-6822.
CY United States
DT Journal Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199602
AB The mechanisms underlying severe thrombocytopenia in **dengue** hemorrhagic fever/**dengue** shock syndrome (DHF/DSS) are not completely understood. We present here the first evidence that **dengue** type 2 virus binds to human platelets only in the presence of virus-specific antibody, supporting a role for immune-mediated clearance of platelets in the pathogenesis of thrombocytopenia in DHF/DSS.
Antibody-enhanced binding of virus of platelets was also demonstrated with a panel of eight murine **monoclonal** antibodies specific for the **dengue** E protein. The degree of binding was dependent on the antibody used but not on the antibody IgG subclass, indicating that factors other than the platelet Fc receptor are involved in binding of virus-antibody complexes to the platelet surface. Confirmation that antibody-dependent virus binding to platelets is not primarily mediated by the platelet Fc receptor was obtained by demonstrating good binding even when platelets were pretreated with the Fc gamma RII-specific antibody IV.3.

L17 ANSWER [illegible] OF 23 MEDLINE
AN [illegible] MEDLINE
DN [illegible]
TI Antibodies that block virus attachment to **Vero** cells are a major component of the human neutralizing antibody response against **dengue** virus type 2.
AU He R T; Innis B L; Nisalak A; Usawattanakul W; Wang S; Kalayanarooj S; Anderson R
[illegible] Department of Microbiology and Tropical Diseases, University of [illegible],
[illegible]..
[illegible] JOURNAL OF MEDICAL VIROLOGY, [illegible] Apr [illegible] 4 [illegible]..
Journal code: [illegible]. ISSN: [illegible].
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM [illegible]
AB Epidemiological data strongly implicate a role for the host immune [illegible] of **dengue**

[illegible] **dengue** [illegible]

dengue-2 virus to monkey kidney (**Vero**) cells. Since **Vero** cells possess virus receptors but not Fc receptors we conclude that the major effect of host neutralizing antibodies is to block virus attachment to **Vero** cell **dengue** virus receptors. Analysis of 61 patient antisera yielded good correlation (Pearson's coefficient = 0.90; P < 0.001) between neutralizing activity and ability to block virus-cell attachment suggesting that antibody-mediated neutralization of **dengue** virus occurs primarily extracellularly and less by a postattachment mechanism as has been described for certain other viruses.

L17 ANSWER 10 OF 23 MEDLINE
AN 95374883 MEDLINE
IN 95374883
TI Epitope mapping of **dengue** 1 virus E glycoprotein using **monoclonal** antibodies.
AU Simantini E; Banerjee K
CS National Institute of Virology, Pune, India.
SO ARCHIVES OF VIROLOGY, (1995) 140 (7) 1257-73.
Journal code: 8L7. ISSN: 0304-8608.
CY Austria
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199511
AB Ten **monoclonal** antibodies (MAbs) were raised against **dengue** 1 (DEN 1, Hawaii) virus E glycoprotein. Specificity of the MAbs was tested by ELISA and immunofluorescence. Eight were DEN 1 type-specific, one was DEN group-reactive (DGR) and one was flavivirus cross-reactive (FCR). Two of these type specific MAbs exhibited haemagglutination-inhibition (HI) and neutralized (N) DEN 1 virus in vivo (HS). These two MAbs showed 100% protection against a challenge of 100 LD50 of DEN 1 virus in adult Swiss albino mice. The remaining six MAbs were HI negative, N negative and non-protective against challenge (NHS). Of these only three were reactive in the CF test. The DGR, FCR and one of the NHS MAbs (NHS-3) did not react with DEN 1 virus grown in **Vero** cells, whereas they reacted with DEN 1 virus grown in LLC-MK2 and C6/36 cells in immunofluorescence, probably indicating a difference in the synthesis/processing of viral proteins in these different cell lines. An epitope map of the E gp was drawn using a computer programme based on the additivity index values. The epitope map delineated five domains, a) S-I representing type-specific, HI positive, N positive and protecting MAbs. b) S-II representing type-specific, HI negative, N negative MAbs. c) S-III representing type-specific HI, N negative MAb, but distinct from S-II. d) DGR representing HI/N negative DEN group reactive MAb. e) FCR [illegible] HI N negative flavivirus cross-reactive MAb. Epitope analysis of a number of different DEN 1 strains isolated in India over a period of 37 years showed that the domains S-II and S-III were left with HI negative, DEN-1 specific MAbs were variable. The DGR domain and the S-I domains were conserved.

L17 ANSWER 11 OF 23 MEDLINE
AN 94 [illegible] MEDLINE
IN 94 [illegible]
TI Immunofluorescence studies on the replication of [illegible]

PT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199401
AB Porcine stable kidney (PS) or **Vero** cells infected with either flavi- Japanese encephalitis--JE, West Nile--WN, and **Dengue** --DEN-2) or alphaviruses (Chikungunya--CHIK and Sindbis--SIN) were stained in indirect fluorescent antibody (FA) assay with anti-JE virus **monoclonal** (MoAb) Hx-3 (flavivirus cross-reactive) and polyclonal (immune PF) antibodies. By 48 hr post infection (p.i.), 15 to 20% of the three flaviviruses and CHIK virus infected cells, which revealed positive cytoplasmic immunofluorescence (IF), showed intranuclear IF. By 24 hr p.i., the intranuclear IF was not observed or became diminished. The enucleation of cells by cytochalasin B treatment prior to the infection with any of the three flaviviruses resulted in the loss of IF compared with the cells enucleated after the infection (18 hr p.i.) whereas SIN or CHIK virus-infected cells reacted similarly by the either method. These findings indicate an essential role of the nucleus in the replication of the flaviviruses only and while replicating in the infected cells, flaviviruses and CHIK virus might express viral specific proteins in the cell nuclei.

L17 ANSWER 12 OF 23 MEDLINE
AN 93212153 MEDLINE
DN 93212153
TI Continuous cell lines and immune ascitic fluid pools in arbovirus detection.
AU Digoutte J P; Calvo-Wilson M A; Mondo M; Traore-Lamizana M; Adam F
CS Institut Pasteur de Dakar..
SO RESEARCH IN VIROLOGY, (1992 Nov-Dec) 143 (6) 417-22.
Journal code: R7E. ISSN: 0923-2516.
CY France
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199307
AB Successive experiments led us to use two cellular systems, MOS61 (Aedes pseudoscutellaris cells) and **Vero** cells, among the continuous cell lines recommended by the WHO Collaborating Center for systematic research and isolation of arboviruses. Virus detection in cell cultures is carried out with 7 mixtures containing 10 hyperimmune ascitic fluids made with the reference viruses. This technique enables the detection of 70 of the 80 arboviruses transmitted by mosquitoes in Africa and very easily detects arbovirus associations by using either monospecific or **monoclonal** immune ascitic fluids (**dengue**-1-2-3-4 and yellow fever viruses) used in the indirect immunofluorescence technique.

L17 ANSWER 13 OF 23 MEDLINE
AN [illegible] MEDLINE
DN [illegible]
TI Differences in [illegible] and [illegible] of Japanese encephalitis viruses.
AU Higgs S; Gould E A
CS [illegible] Institute of Virology and Environmental Microbiology, Oxford, England..
SO [illegible] OF VIROLOGY, [illegible] (1-2) [illegible].
Journal code: [illegible]. [illegible]

epitopes were previously demonstrated on this glycoprotein using polyclonal sera from **dengue** virus-infected animals and human, this is the first report of the isolation of MAbs which define these determinants and which will allow their further analysis.

L17 ANSWER 15 OF 23 MEDLINE
AN 91201518 MEDLINE
DN 91201518
TI Immunoaffinity purification of native dimer forms of the flavivirus non-structural glycoprotein, NS1.
AU Falconar A K; Young P R
CS Sir Albert Sakzewski Virus Research Laboratory, Royal Children's Hospital, Brisbane, Australia.
SO JOURNAL OF VIROLOGICAL METHODS, (1990 Dec) 30 (3) 323-32.
Journal code: HQE. ISSN: 0166-0934.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199107
AB The flavivirus non-structural glycoprotein, NS1 has been shown to elicit an immune response in animals which may confer protection from subsequent virus challenge (Schlesinger et al., 1985 and 1987). While previous reports have outlined methods for obtaining cell associated NS1 in monomeric form for these studies, we describe here an efficient method for the immunoaffinity purification of both cell-associated and secreted NS1 in their native dimeric configuration. These dimer preparations were shown to be both more antigenic and immunogenic than their monomeric counterparts, a finding which may in part explain the reported failure to obtain silid protection of mice from homologous **dengue** virus challenge. In moderately sized virus growth experiments, greater than 1 mg quantities of purified NS1 were obtained.

L17 ANSWER 16 OF 23 MEDLINE
AN 90362075 MEDLINE
DN 90362075
TI Low pH-induced cell fusion in flavivirus-infected Aedes albopictus cell cultures.
AU Randolph V B; Stollar V
CS Department of Molecular Genetics and Microbiology, Robert Wood Johnson Medical School, University of Medicine and Dentistry of New Jersey, Piscataway 08854..
NC AI-25921 (NIAID)
CA CA-[illegible] (NCI)
SO [illegible]
CY [illegible]
DT [illegible]
LA [illegible]
FS [illegible]
EM [illegible]
AB Cell-to-cell fusion of Aedes albopictus (mosquito) cells infected with **dengue** and St Louis encephalitis (SLE) flaviviruses was induced by exposure to low pH. The parameters of this low pH-induced fusion were examined. Syncytium formation was maximal in cultures 3[illegible] to 4[illegible]

Vero

Fusion was shown to be ATP-dependent and could be prevented by the addition of either polyclonal antiviral antibody or **monoclonal** antibody to the envelope glycoprotein. The lysosomotropic amine ammonium chloride inhibited the replication of SLE virus in both mosquito and vertebrate cells, consistent with the idea that low pH-induced fusion is necessary for virus entry into both types.

L17 ANSWER 17 OF 33 MEDLINE
AN 90264781 MEDLINE
DN 90264781
TI Immunogenicity of a purified fragment of 17D yellow fever envelope protein.
AU Brandriss M W; Schlesinger J J; Walsh E E
CS Rochester General Hospital, New York..
SO JOURNAL OF INFECTIOUS DISEASES, (1990 Jun) 161 (6) 1134-9.
Journal code: IHI. ISSN: 0022-1899.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199009
AB Information on the immunogenic properties of purified flavivirus proteins may be useful in the development of recombinant or synthetic peptide vaccines. Using a **monoclonal** antibody, an attempt was made to purify the envelope (E) protein of 17D yellow fever virus (17D YF) by affinity chromatography. The purified material could not be identified as intact E protein but it did bear antigenic determinants of E as determined by selective reactivity with anti-E **monoclonal** antibodies. Rabbits immunized with this material produced antibodies that neutralized 17D YF and **dengue**-2 viruses in comparable titers, indicating that cross-reactive antigenic determinants were preserved. Immunization of mice resulted in protection against intracerebral challenge with 17D YF.

L17 ANSWER 18 OF 33 MEDLINE
AN 90155212 MEDLINE
DN 90155212
TI Identification of **monoclonal** antibodies that distinguish between 17D-204 and other strains of yellow fever virus.
AU Barrett A D; Mathews J H; Miller B R; Medlen A R; Ledger T N; Roehrig J T
CS Department of Microbiology, University of Surrey, Guildford, U.K.
SO JOURNAL OF GENERAL VIROLOGY, (1990 Jan) 71 (Pt 1) 13-8.
Journal code: I3S. ISSN: 0022-1317.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Yale Journals
EM 199003
AB Eight **monoclonal** antibodies (MAbs) prepared against the flavivirus Saint Louis encephalitis, **dengue** 2 and **dengue** 4 viruses all recognized epitopes on the envelope protein of the prototype flavivirus, yellow fever (YF) virus. Three of these MAbs with flavivirus group-common specificity and two MAbs with a flavivirus-subgroup specificity were found to distinguish wild-type YF viruses from YF 17D-204 vaccine virus, but not from the closely related 17DD vaccine virus, nor from the French neurotropic vaccine virus. This pattern of reactivity was seen only with viruses grown in Aedes

vivo. Neutralization tests showed that all five MAbs would neutralize wild-type Asibi virus grown in SW13 cells, but not Asibi virus grown in C6/36 cells, nor 17D-204 vaccine virus grown in either cell type. Therefore, it is concluded that when YF virus is grown in mosquito cells, wild-type virus is antigenically and biologically distinct from the 17D-204 vaccine virus.

L17 ANSWER 19 OF 23 MEDLINE
AN [illegible] MEDLINE
DN [illegible]
TI Detection of **dengue** 4 virus core protein in the nucleus. II. Antibody against **dengue** 4 core protein produced by a recombinant baculovirus reacts with the antigen in the nucleus.
AU Makino Y; Tadano M; Amtai T; Ma S P; Yasuda S; Fukunaga T
CS Department of Virology, School of Medicine, University of the Ryukyus, Okinawa, Japan..
SO JOURNAL OF GENERAL VIROLOGY, (1989 Jun) 70 (Pt 6) 1417-25.
Journal code: I9B. ISSN: 0022-1317.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
FS Priority Journals; Cancer Journals
EM 199908
AB The **dengue** 4 virus (DEN-4) core gene and part of the PreM genes were inserted into the baculovirus polyhedrin gene region. The recombinant baculovirus directed the synthesis of the DEN-4 core protein fused to a part of the polyhedrin protein. (Mr 25K), as determined by Western blot analysis using DEN-4 core **monoclonal** antibody. A mouse polyclonal antibody prepared against the DEN-4 core fusion protein showed antigenic reactivity with the authentic DEN-4 core protein (Mr 15.5K) present in the nucleus as well as in the cytoplasm of DEN-4-infected **Vero** cells as demonstrated by the peroxidase-antiperoxidase staining method. This antibody did not react with cells infected with DEN-1, -2, -3 or Japanese encephalitis virus, or mock-infected cells.

L17 ANSWER 20 OF 23 MEDLINE
AN 87154129 MEDLINE
DN 87154129
TI **Monoclonal** antibodies against **dengue** 2 virus E-glycoprotein protect mice against lethal **dengue** infection.
AU Kaufman B M; Summers P L; Dubois D R; Eckels K H
SO AMERICAN JOURNAL OF TROPICAL MEDICINE AND HYGIENE, (1987 Mar) 36 (2) 427-34.
Journal code: 3ZQ. ISSN: 0002-9637.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus; Journals; Priority Journal
EM [illegible]
AB A panel of 11 murine **monoclonal** antibodies directed against **dengue** type 2 was evaluated for antigen specificity by an immunobinding assay and Western blot analysis and for in vitro and in vivo biological activities. Nine of the 11 **monoclonal** antibodies reacted with viral E-glycoprotein based on the Western blot analysis; one reacted with a 36 Kd protein present in **dengue**-infected C6/36 mosquito cells. The nine E glycoprotein-reactive **monoclonal** antibodies also neutralized **dengue** 2 virus in a plaque reduction [illegible] monoclonal [illegible]

L17 ANSWER 21 OF 23 MEDLINE
AN 87199485 MEDLINE
DN 87199485
TI Protection of mice against **dengue** 2 virus encephalitis by immunization with the **dengue** 2 virus non-structural glycoprotein NS1.
AU Schlesinger J J; Brandriss M W; Walsh E E
SO JOURNAL OF GENERAL VIROLOGY, (1987 Mar) 68 (Pt 3) 853-7.
Journal code: I9B. ISSN: 0022-1317.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198704
AB Immunization of mice with the **dengue** 2 virus (DEN 2)-specified non-structural protein NS1 provided significant protection against intracerebral challenge with the virus in the absence of detectable neutralizing or other anti-virion antibody. NS1, purified from lysates of infected **Vero** cells by immunoaffinity chromatography, expressed an antigenic site(s) common to each of the four DEN serotypes, and hyperimmunization of rabbits with NS1 stimulated production of complement-fixing (CF) antibody with broad DEN serotype specificity. However, cross-protection was not observed: mice immunized with DEN 2 NS1 developed little or no heterologous CF antibody and were not protected against challenge with neurovirulent DEN 1. Induction of a protective immune response by NS1 suggests that it be considered for incorporation into possible synthetic or recombinant DNA DEN vaccines.

L17 ANSWER 22 OF 23 MEDLINE
AN 86114008 MEDLINE
DN 86114008
TI Lethal 17D yellow fever encephalitis in mice. I. Passive protection by **monoclonal** antibodies to the envelope proteins of 17D yellow fever and **dengue** 2 viruses.
AU Brandriss M W; Schlesinger J J; Walsh E E; Briselli M
SO JOURNAL OF GENERAL VIROLOGY, (1986 Feb) 67 (Pt 2) 229-34.
Journal code: I9B. ISSN: 0022-1317.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198605
AB **Monoclonal** antibodies to the envelope proteins (E) of the 17D vaccine strain of yellow fever virus (17D YF) and to **dengue** 2 virus were examined for their ability to confer passive protection against lethal 17D YF encephalitis in mice. All 13 IgG anti-17D YF antibodies, [illegible] neutralizing activity, conferred [illegible] protection when administered [illegible] prior to intracerebral challenge with virus. Three antibodies with high in vitro neutralizing titers were all protective at a low dose and were termed high-affinity antibodies. A flavivirus group-reactive antibody to **dengue** 2 virus conferred similar protection at low dose. Protection was also observed when antibodies were given several days after virus inoculation when peak infectious virus titers and histopathological evidence of infection were present in brains. The ability of a non-neutralizing antibody to protect [illegible] be attributed to complement-dependent lysis of virus-infected [illegible]

may be relevant to the design of prospective flavivirus vaccines and support the possibility of conferring broadened protection among flaviviruses by stimulating the antibody response to appropriate epitopes of the E protein.

L17 ANSWER 23 OF 23 MEDLINE
AN 85177217 MEDLINE
DN 85177217
TI [**Dengue** in Burkina Faso (ex-Upper Volta): seasonal epidemics in the urban area of Ouagadougou].
La **dengue** au Burkina Faso (ex-Haute-Volta): epidemies saisonnieres en milieu urbain a Ouagadougou.
AU Gonzalez J P; Du Saussay C; Gautun J C; Mcdermick J B; Mauchet J
SO BULLETIN DE LA SOCIETE DE PATHOLOGIE EXOTIQUE ET DE SES FILIALES, (1985) 78 (1) 7-14.
Journal code: C43. ISSN: 1037-9045.
CY France
DT Journal; Article; (JOURNAL ARTICLE)
LA French
FS Priority Journals
EM 198504
AB During the rainy season of 1982 30 patients (29 european and 1 voltaic) presented with an intense **dengue**-like syndrome in Ouagadougou city. 73.3 of these cases possessed anti-flavivirus fluorescent antibodies while 30 , were positive for specific anti-**Dengue** IgM antibodies. **Vero** type E 6 cell cultures were used to isolate six strains of **Dengue** 2 virus; **monoclonal** antibodies were used for viral identification. These strains constitute the first isolates of human **Dengue** virus in Upper Volta. Authors present conditions of virus isolations, describe the observed syndrome and discuss the epidemiological interest of this outbreak.

=> s l17 and l5

L18 6 L17 AND L5

=> d l18 1-6 bib ab

L18 ANSWER 1 OF 6 MEDLINE
AN [illegible] MEDLINE
DN [illegible]
TI **Dengue** NS1-specific antibody responses: isotype distribution and serotyping in patients with **Dengue** fever and **Dengue** hemorrhagic fever.
AU [illegible]
CS [illegible]
SO JOURNAL OF MEDICAL VIROLOGY, [illegible]
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM [illegible]
AB To understand the antibody responses to **dengue** [illegible]

monoclonal

capture soluble NS1 antigens secreted in the culture supernatants of **Vero** cells infected with DEN virus. We observed strong anti-NS1 antibody responses in all of the convalescent sera of patients with DF and DHF. Similar NS1-specific isotypic and serotypic antibody responses were found in the sera from DF and DHF patients. The results showed that all DEN infections induced significant NS1-specific IgG, whereas 75% and 63% of primary DF patients vs. 40% and 90% of secondary DF patients produced IgM and IgA antibodies, respectively. Specificity analysis showed that DEN NS1-specific IgG and IgA antibodies cross-react strongly to Japanese encephalitis (JE) virus NS1 glycoprotein, whereas DEN NS1-specific IgM antibodies do not cross-react to JE virus NS1 glycoprotein at all. The **serotype** specificity of NS1-specific IgM, IgA and IgG were found to be 80%, 67% and 75% for primary infections, and 50%, 22% and 80% for secondary infections in positive samples of DF patients. Similar pattern was found in DHF patients. The results showed that all of the DF and DHF patients produced significant NS1-specific antibodies. We did not observe direct correlation between the anti-NS1 antibody responses and DHF because sera from patients with DF and DHF showed similar anti-NS1 antibody responses.

L19 ANSWER 2 OF 6 MEDLINE
AN 2000164671 MEDLINE
DN 20164671
TI An antigen capture enzyme-linked immunosorbent assay reveals high levels of the **dengue** virus protein NS1 in the sera of infected patients.
AU Young P R; Hilditch P A; Bletchly C; Halloran W
CS Sir Albert Sakzewski Virus Research Centre, The Royal Children's Hospital, Herston, Brisbane 4029, Australia.. p.young@mailbox.uq.edu.au
SO JOURNAL OF CLINICAL MICROBIOLOGY, (2000 Mar) 38 (3) 1053-7.
Journal code: HSH. ISSN: 0095-1137.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200006
EW 20000602
AB We describe the development of a capture enzyme-linked immunosorbent assay for the detection of the **dengue** virus nonstructural protein NS1. The assay employs rabbit polyclonal and **monoclonal** antibodies as the capture and detection antibodies, respectively. Immunoaffinity-purified NS1 derived from **dengue** 2 virus-infected cells was used as a standard to establish a detection sensitivity of approximately 4 ng/ml in an assay employing **monoclonal** antibodies recognizing a **dengue** 2 **serotype**-specific epitope. A number of **serotype**-specific **monoclonal** antibodies were also shown to be suitable probes for the detection of NS1 expressed by the remaining three **dengue** virus **serotypes**. Examination of clinical samples demonstrated that the assay was able to detect NS1 with minimal interference from serum components at the test dilutions routinely used, suggesting that it could form the basis of a useful additional diagnostic test for **dengue** virus infection. Furthermore, quantitation of NS1 levels in patient sera may prove to be a valuable [illegible] high levels of NS1, in particular

PT Journal; Article; (JOURNAL ARTICLE)
LA English.
FS Priority Journals
EM 199411
AB Hybridoma cell lines secreting **monoclonal** antibodies to type 3 poliovirus were prepared, and their reactivity with infectious virus (I antigen), empty particles (C antigen), and isolated virion capsid proteins (VP) were examined. Eight antibodies reacted with epitopes common to I and C antigens, and all of these possessed high titers of neutralizing activity. However, only 12 of 19 antibodies that reacted exclusively with I antigen neutralized virus infectivity, and some of these reacted only with strains of virus with T1-oligonucleotide maps identical or similar to that of Sabin vaccine **polio** virus. These antibodies will be of value in identifying strains of virus derived from Sabin vaccine. None of the 11 **monoclonal** antibodies that neutralized type 3 poliovirus strains reacted in immunoblot experiments with isolated virion capsid proteins. However, six of the 24 antibodies that reacted only with noninfectious C antigen bound to VP1 and VP3, and three of these antibodies also reacted with proteins of poliovirus types 1 or 2. The lack of reactivity of neutralizing **monoclonal** antibodies with isolated viral proteins suggests that the antigenic properties of proteins are determined by their arrangement in the virus and not simply by amino acid sequence.

L14 ANSWER 30 OF 31 MEDLINE
AN 83109404 MEDLINE
DN 83109404
TI Antibodies to poliovirus detected by immunoradiometric assay with a **monoclonal** antibody.
AU Spitz M; Fissati C A; Schila G C; Spitz L; Brasher M
SO JOURNAL OF VIROLOGICAL METHODS, (1982 Oct) 5 (2) 101-11.
Journal code: HDR. ISSN: 0166-0934.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
FS Priority Journals
EM 198305
AB An immunoradiometric assay (IRMA) for the assay of antibodies to poliovirus antigens is described. Dilutions of the test sera or whole (finger prick) blood samples were incubated with the Poliovirus antigen bound to a solid phase and the specific antibody was detected by the addition of a mouse anti-human IgG **monoclonal** antibody (McAb), which was itself revealed by iodinated sheep IgG anti-mouse F(ab). We [illegible] it was that this technique is suitable for the estimation of IgG anti-poliovirus antibodies induced in children following **polio** vaccine. The present study shows that IRMA provides a simple and inexpensive method for serological studies with poliovirus particularly for use in large-scale surveys.

L14 ANSWER 31 OF 31 MEDLINE
AN [illegible] MEDLINE
DN [illegible]
TI [illegible] of **monoclonal** antibodies against **polio** virus.

FS Priority Journals
EM 19[illegible]
Ab lymphocyte hybridomas secreting **monoclonal** antibodies against
    different strains of **polio** virus type 1, 2, or 3 have been
    produced. For this purpose Balb/C mice were immunized with purified and
    inactivated virus suspensions and their splenocytes were fused with
    P3X63Ag8 mouse myeloma cells. Screening for antibody production was
    performed in an enzyme-linked immunosorbent assay (ELISA). Antibodies
were
    produced either in cell culture or in Balb/C mice by passaging the
    hybridomas as solid or ascitic tumors, after they had been cloned at
least
    three times by limiting dilutions in microtiter plates. Specificities of
a
    number of these **monoclonal** antibodies were determined in the
    ELISA and in a neutralization test using different **polio** virus
    subtypes. The results indicate that for epidemiological studies
    monoclonal antibodies may prove to be very useful tools. Also the
    use of **monoclonal** antibodies for vaccine production (affinity
    chromatography; characterization of viral substructures) and routine
    vaccine control purpose (antigen quantification; neutralization of
vaccine
    virus) seems attractive. Two of the neutralizing **monoclonal**
    antibodies against **polio** virus type 1, showed a selective
    immunoprecipitation with VP1, which suggests that VP1 is an important
    polypeptide for the induction of neutralizing antibody in vivo.

=> s dengue

L16   3233 DENGUE

=> s l16 and l3 and l4

L17   23 L16 AND L3 AND L4

=> d l17 1-23 bib ab

L17 ANSWER 1 OF 23 MEDLINE
AN [illegible] MEDLINE
DN 20459477
TI **Dengue** NS1-specific antibody responses: isotype distribution and
    serotyping in patients with **Dengue** fever and **Dengue**
    hemorrhagic fever.
AU Shu P Y; Chen L K; Chang S F; Yueh Y Y; Chow L; Chien L J; Chin C; Lin T
    H; Huang J H
CS [illegible] of Vector-Borne Infectious Diseases, Center for Disease Cont[illegible],
    Department of Health, Taipei, Taiwan, Republic of China.
SO [illegible]
    [illegible]
CY United States
DT Journal; Article; JOURNAL ARTICLE
LA English
FS Priority Journals
EM [illegible]
AB To understand the antibody responses to **dengue** (DEN)
    [illegible] NS1 glycoprotein and their roles in protective immunity
    [illegible] pathogenesis of **dengue** fever (DF) and **dengue**

    Vero

serologically confirmed primary infection. The presence of high levels of secreted NS1 in [redacted] sera of patients experiencing [redacted] secondary **dengue** virus infections, and in the context of an anamnestic antibody response, suggests that NS1 may contribute significantly to the formation of the circulating immune complexes that are suspected to play an important role in the pathogenesis of severe **dengue** disease.

L18 ANSWER 3 OF 6 MEDLINE
AN 1998091941 MEDLINE
DN 98091941
TI First record in America of Aedes albopictus naturally infected with **dengue** virus during the 1995 outbreak at Reynosa, Mexico.
AU Ibanez-Bernal S; Briseno B; Mutebi J P; Argot E; Rodriguez G; Martinez-Campos C; Paz R; de la Fuente-Jan. Roman P; Tapia-Conyer R; Flisser A
CS Entomology Department, INDRE, Mexico, D.F. Mexico.
SO MEDICAL AND VETERINARY ENTOMOLOGY, (1997 Oct) 11 (4) 305-9.
Journal code: A90. ISSN: 0269-283X.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
FS Priority Journals
EM 199805
EW 19980502
AB Mosquito collections were conducted during a **dengue** outbreak in Reynosa, Tamaulipas, Mexico, July-December 1995. A total of 6694 adult mosquitoes (four genera and nine species) were captured, of which 2986 (78.3% females and 21.7% males) were Aedes albopictus and 2339 (39.7% females and 60.3% males) were Ae.aegypti. These two species comprised 84.2% of the total collection. Specimens were grouped into pools, nearly 50% of them processed for detection of virus by cythopathic effect in C6-36 and **VERO** cell cultures and by haemagglutination test. Five pools gave positive haemagglutination reactions and were examined by immunofluorescence using **monoclonal** antibodies to flavivirus and to **dengue** virus. One pool of ten Ae.albopictus males was positive for **dengue** virus: **serotypes** 2 and 3 were identified by **serotype**-specific **monoclonal** antibodies and confirmed by RT-PCR. This is the first report of Ae.albopictus naturally infected with **dengue** virus in America. Also, it is the very first time Ae.albopictus males have been found infected with **dengue** virus in the wild.

L18 ANSWER 4 OF 6 MEDLINE
AN 97042289 MEDLINE
DN 97042289
TI **Dengue** 1 virus binding to human hepatoma HepG2 and simian **Vero** cell surfaces differs.
AU [redacted]
CS [redacted]
SO [redacted]
CY [redacted]
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
FS Priority Journals; Cancer Journals
EM [redacted]
EW [redacted]
[redacted] **dengue** [redacted]

[redacted] Vero [redacted]

formulations may be improved by the addition of trypsin treated type 3, as
suggested by Roivainen and Hovi (J Virol 1987; 61: 3749-3753, but not by
the addition of trypsin treated type 2 poliovirus.

L14 ANSWER 9 OF 31 MEDLINE
AN 94258144 MEDLINE
DN 94258144
TI A novel member of the immunoglobulin gene superfamily expressed in rat carcinoma cell lines [published erratum appears in J Biol Chem 1995 Sep 1;270(35):20870].
AU Shademan C; LeMouellac B; Denis M G
CS Department of Medical Biochemistry, INSERM CJF 90-11, Nantes, France.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1994 Jun 3) 269 (22) 15601-5.
Journal code: HIV. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Cancer Journals; Priority Journals
OS GENBANK-L12025
EM 199409
AB Defined by **monoclonal** antibody E4, the pE4 antigen is a 66,000-Da glycoprotein which is expressed at the cell surface of rat colon and mammary carcinomas, but only in trace amounts in normal adult rat tissues. To determine the structure of this tumor-associated antigen and to identify its functional domains, we have cloned a cDNA coding for this protein. It encodes a 416-amino acid protein with an expected molecular weight for the core protein of approximately 42,000. The predicted amino acid sequence reveals that pE4 contains the conserved amino acids and domain structures characteristic of members of the immunoglobulin gene superfamily. Comparison of this sequence with data banks revealed a significant homology with the human and mouse receptors for **polio** -virus. However, pE4 is not the rat receptor for poliovirus, as different patterns were obtained by hybridization of rat genomic DNA with both probes. A major approximately 2.2-kilobase transcript of the pE4 gene was detected in all the rat tumor cell lines tested. In contrast, barely detectable levels of pE4 mRNA were found in normal adult rat tissues.

L14 ANSWER 10 OF 31 MEDLINE
AN 92376407 MEDLINE
DN 92376407
TI Using the virus challenge dose in the analysis of virus neutralization assays.
AU Parker R A; Pallansch M A
CS Department of Preventive Medicine, Vanderbilt University School of Medicine, Nashville, TN 37232-2637..
SO [illegible]
[illegible]
PY [illegible]
DT [illegible]
LA English
FS Priority Journals
EM 199211
AB We propose a new basis for adjusting the results of virus neutralization assays. These assays consist of two separate experiments performed in parallel: a virus titration experiment and a serum dilution assay. In the

results only to ensure that the overall experiment is acceptable; the specific results of the virus titration experiments are not used to adjust the estimate of serum neutralizing activity. Although adjustment based on calibration with reference sera could be done, this seldom occurs in practice. We use results from recent studies of the kinetics and stoichiometry of **polio** virus neutralization with **monoclonal** antibodies to develop a method to use results from the virus titration experiment to adjust the serum neutralizing activity directly. Our results also indicate that a simple ad hoc procedure can improve the accuracy of the estimated serum neutralizing activity.

L14 ANSWER 11 OF 31 MEDLINE
AN 92351044 MEDLINE
IN 92351044
TI Isolation of polioviruses from sewage and their characteristics: experience over two decades in Sweden.
AU Bottiger M; Herrstrom E
CS Department of Epidemiology, National Bacteriological Laboratory, Stockholm, Sweden..
SO SCANDINAVIAN JOURNAL OF INFECTIOUS DISEASES, (1992) 24 (2) 151-5.
Journal code: USM. ISSN: 0036-5548.
CY Sweden
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199211
AB Indigenous **polio** ceased in Sweden in 1962 after 5 years' use of killed **polio** vaccine. In 1967, it was considered of interest to investigate whether poliovirus was present in the sewage. A method for selective isolation of poliovirus from sewage was developed. The method appeared to increase the yield. The studies were carried out at intervals up to 1990. In 1989-90, the virus isolates were characterized by the use of **monoclonal** antibodies differentiating between vaccine-like (Sabin-like) and non-vaccine-like strains. Polioviruses of both kinds were isolated throughout the period. Two periods were of special interest. The first was in 1977, when a single, paralytic, type-2 case occurred in Sweden in an unvaccinated sect. The second was in 1984-85 when a type-3 epidemic broke out in Finland, followed by vaccinations of the whole Finnish population with live oral **polio** vaccine. On both occasions the implicated viruses could be traced to a high degree in sewage in Sweden. The absence of poliovirus isolations from faecal specimens of patients and the isolation of live poliovirus vaccine virus, i.e. a vaccine not used in Sweden, indicate that the virus strains are imported.

L14 ANSWER 12 OF 31 MEDLINE
AN [illegible] MEDLINE
IN [illegible]
TI Application of **monoclonal** antibody panels in the virological surveillance of [illegible] epidemic in Poland, 1991-1992.
AU [illegible]
CS Department of Virology, National Institute of Hygiene, Warsaw, Poland..
SO BULLETIN OF THE WORLD HEALTH ORGANIZATION, (1992) 70 (3) 327-33.
Journal code: [illegible]
CY Switzerland
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS [illegible]
EM [illegible]

serotype 4; **serotype** 2 circulated intermittently and **serotype** 3 was [redacted]ly absent (only one subgroup [redacted] strain was detected). Two electropherotypes, bbba and cbba, accounted for the largest proportion of the 345 HRV strains examined, 74 (21.4) and 222 (64.3) strains, respectively. Unexpected combinations of subgroup, **serotype** and electropherotype were detected in 5 subgroup I strains, of which 4 possessed a "long" RNA pattern (1 **serotype** 3 and 3 **serotype** 4 strains) and one a "short" RNA pattern (a **serotype** 4 strain). In addition, 4 group C HRV strains (atypical HRV or parartoviruses) were detected on the basis of electropherotype. These findings emphasize the need for continuous surveillance of HRV infections in different geographic areas of the world in order to detect the appearance of new strains early and to adopt adequate strategies for **vaccine** preparation and administration.

L11 ANSWER 21 OF 32 MEDLINE
AN 91146078 MEDLINE
DN 91146078
TI Evaluation of three panels of **monoclonal** antibodies for the identification of human **rotavirus** VP7 **serotype** by ELISA.
AU Green K Y; James H D Jr; Kapikian A Z
CS Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health (NIH), Bethesda, MD 20892..
SO BULLETIN OF THE WORLD HEALTH ORGANIZATION, (1990) 68 (5) 601-10.
Journal code: C60. ISSN: 0042-9686.
CY Switzerland
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
EM 199106
AB Three panels of **monoclonal** antibodies used for **rotavirus** **serotype** identification by enzyme-linked immunosorbent assay (ELISA) were evaluated at the National Institutes of Health, USA, to identify antibodies suitable for distribution to laboratories involved in WHO-sponsored trials of **rotavirus** **vaccines**. Two of the panels were comparably effective in identifying the **serotype** of each of the human **rotavirus** reference strains of **serotype** 1, 2, or 3. In addition, one of the panels included a **monoclonal** antibody that was effective in identifying strains of **serotype** 4. However, two different lots of a third, commercially available panel were not effective in identifying the eight strains representing the four **serotypes**. A third shipment of this panel was therefore tested using revised instructions and, under these conditions, it was effective in serotyping seven of the eight reference strains. It appears that a battery of **monoclonal** antibodies for each **serotype** may be required to identify antigenic variants within a **serotype**. Additional studies are needed to assess the extent of antigenic variation in **rotavirus** field strains.

L11 ANSWER 22 OF 32 MEDLINE
AN [redacted] MEDLINE
DN [redacted]
TI **Serotype** variation of human group A rotaviruses in two regions of the USA.
AU [redacted]; Estes M K; Burns J W; Greenberg H B; Taniguchi K; Urasawa S
CS [redacted]

L18 ANSWER 3 OF 6 MEDLINE
AN 1998091941 MEDLINE
DN 98091941
TI First record in America of Aedes albopictus naturally infected with **dengue** virus during the 1995 outbreak at Reynosa, Mexico.
AU Ibanez-Bernal S; Briseno B; Mutebi J P; Argot E; Rodriguez G; Martinez-Campos C; Paz E; de la Fuente-San Roman P; Tapia-Conyer R; Flisser A
CS Entomology Department, INDRE, Mexico, D.F. Mexico.
SO MEDICAL AND VETERINARY ENTOMOLOGY, (1997 Oct) 11 (4) 305-9.
Journal code: A90. ISSN: 0269-283X.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199805
EW 19980502
AB Mosquito collections were conducted during a **dengue** outbreak in Reynosa, Tamaulipas, Mexico, July-December 1995. A total of 6694 adult mosquitoes (four genera and nine species) were captured, of which 2986 (7%.3% females and 21.7% males) were Aedes albopictus and 2339 (39.7% females and 60.3% males) were Ae.aegypti. These two species comprised 84.2% of the total collection. Specimens were grouped into pools, nearly 50% of them processed for detection of virus by cythopathic effect in C6-36 and **VERO** cell cultures and by haemagglutination test. Five pools gave positive haemagglutination reactions and were examined by immunofluorescence using **monoclonal** antibodies to flavivirus and to **dengue** virus. One pool of ten Ae.albopictus males was positive for **dengue** virus: **serotypes** 2 and 3 were identified by **serotype**-specific **monoclonal** antibodies and confirmed by RT-PCR. This is the first report of Ae.albopictus naturally infected with **dengue** virus in America. Also, it is the very first time Ae.albopictus males have been found infected with **dengue** virus in the wild.

L18 ANSWER 4 OF 6 MEDLINE

patterns of various viruses with the N-MAbs used for selection of mutants.
A synthetic peptide (amino acids 296 to 313) which included the sequence of epitope I reacted with its corresponding N-MAb, suggesting that the region contains a sequential antigenic determinant. These data may prove useful in current efforts to develop **vaccines** against human **rotavirus** infection.

L11 ANSWER 29 OF 32 MEDLINE
AN [illegible] MEDLINE
DN [illegible]
TI Serotyping of **rotavirus** by NADP-enhanced enzyme-immunoassay.
AU Beards G M
CS Regional Virus Laboratory, East Birmingham Hospital, U.K..
SO JOURNAL OF VIROLOGICAL METHODS, (1987 Nov) 18 (2-3) 77-85.
Journal code: HQR. ISSN: 0166-0934.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
FS Priority Journals
EM 198801
AB A method is described for the serotyping of rotaviruses directly from samples of faeces. **Serotype**-specific **monoclonal** antibodies were used in a solid phase enzyme-immunoassay utilising a novel substrate system based on the de-phosphorylation of NADP, followed by cyclic colour reaction. This method is shown to be approximately 5-10 times more specific and sensitive than assays utilising a conventional substrate for alkaline phosphatase, and allowed **serotypes** to be ascribed to samples which could not be typed by other methods. The value of this method for **rotavirus** epidemiology and **vaccine** trials is discussed.

L11 ANSWER 29 OF 32 MEDLINE
AN 88105674 MEDLINE
DN 88105674
TI Epitope-specific immune responses to **rotavirus** vaccination.
AU Shaw R D; Ping K J; Losonsky G A; Levine M M; Maldonado Y; Yolken R; Flores J; Kapikian A Z; Vo P T; Greenberg H B
CS Department of Medicine, Stanford University School of Medicine, California.
SO GASTROENTEROLOGY, (1987 Nov) 93 (5) 941-50.
Journal code: FHS. ISSN: 0016-5085.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM [illegible]
AB **Rotavirus** [illegible] a leading cause of infant mortality in developing countries and an important cause of morbidity in children [illegible] of age in the United States. **Vaccine** programs have evaluated animal **rotavirus** strains that are attenuated in humans but antigenically similar to some human strains. Whether a single **vaccine** strain can elicit protective immunity in humans to rotaviruses of the same or different **serotypes** is an important question in determining **vaccine** efficacy. We used characterized **serotype**-specific **monoclonal** antibodies directed at VP7 in a competitive radioimmunoassay to measure epitope-specific immune responses to **serotypes** 1, 2, and 3 in sera of children [illegible] serotype 1 rotavirus

Profiles of DEN-1 binding at different pH were markedly different between the two cell types. A type-specific neutralizing monoclonal antibody reduced initial virus binding to both cell types similarly but complex- and group-specific neutralizing antibodies affected virus adhesion differently. Altogether, these results suggest the involvement of different receptors or receptors presented in a different environment on the cell surface in the two cell lines. The sensitivity to proteolytic enzymes and to ionic detergent of the binding sites on the two cell types was tested and results indicated that they may be multimeric proteins or protein complexes.

L18 ANSWER 5 OF 6 MEDLINE
AN 91202134 MEDLINE
DN 91202134
TI Production of dimer-specific and **dengue** virus group cross-reactive mouse **monoclonal** antibodies to the **dengue** 2 virus non-structural glycoprotein NS1.
AU Falconar A K; Young P R
CS Wolfson Molecular Biology Unit, London School of Hygiene & Tropical Medicine, U.K.
SO JOURNAL OF GENERAL VIROLOGY, (1991 Apr) 72 (Pt 4) 961-5.
Journal code: I9B. ISSN: 0022-1317.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199107
AB A panel of mouse **monoclonal** antibodies (MAbs) raised against the non-structural glycoprotein NS1 of **dengue** 2 virus (PR159) was studied for cross-reactivity with the NS1 protein of other **dengue** virus **serotypes** and other members of the Flaviviridae using immunoblotting. Most of the 35 anti-NS1 MAbs were found to be specific for **dengue** 2 virus NS1 (some of which were specific for the native, dimeric form of this protein), but others were found to cross-react within the **dengue** virus group. This latter group of MAbs, although dominated by MAbs defining a **dengue** 2 and 4 virus subgroup, also contained some MAbs that were shown to cross-react with both linear (sequential) and conformational epitopes common to the NS1 glycoproteins of all four **dengue** virus **serotypes**. Several of these MAbs were also able to cross-react with other flaviviruses, most notably viruses from the Japanese encephalitis antigenic complex. Although cross-reactive epitopes were previously demonstrated on this glycoprotein using polyclonal sera from **dengue** virus-infected animals and human, this is the first report of the isolation of MAbs which define these determinants and which will allow their further analysis.

L18 ANSWER 6 OF 6 MEDLINE
AN [illegible] MEDLINE
DN [illegible]
TI Protection of mice against **dengue** 2 virus encephalitis by immunization with the **dengue** 2 virus non-structural glycoprotein NS1.
AU Schlesinger J J; Brandriss M W; Walsh E E
SO JOURNAL OF GENERAL VIROLOGY, (1987 Mar) 68 (Pt 3) 853-7.
Journal code: I9B. ISSN: 0022-1317.
CY ENGLAND: United Kingdom
DT [illegible]

L11 ANSWER 29 OF 32 MEDLINE
AN 88005674 MEDLINE
DN 88005674
TI Epitope-specific immune responses to **rotavirus** vaccination.
AU Shaw R D; Fong K J; Losonsky G A; Levine M M; Maldonado Y; Yolken R; Flores J; Kapikian A Z; Vo P T; Greenberg H B
CS Department of Medicine, Stanford University School of Medicine, California.
SO GASTROENTEROLOGY, (1987 Nov) 93 (5) 941-50.
Journal code: FH3. ISSN: 0016-5085.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English.
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 198801
AB **Rotavirus** gastroenteritis is a leading cause of infant mortality in developing countries and an important cause of morbidity in children under 2 yr of age in the United States. **Vaccine** programs have evaluated animal **rotavirus** strains that are attenuated in humans but antigenically similar to some human strains. Whether a single **vaccine** strain can elicit protective immunity in humans to rotaviruses of the same or different **serotypes** is an important question in determining **vaccine** efficacy. We used characterized **serotype**-specific **monoclonal** antibodies directed at VP7 in a competitive solid-phase immunoassay to measure epitope-specific immune responses to **serotypes** 1, 2, and 3 in sera of children who received a candidate **serotype**-3 **rotavirus** **vaccine**. Antibodies to **serotype** 3 were detected in 72% of sera samples, and to **serotype** 1 and 2 in only 11% each. Also, a VP3-specific **monoclonal** antibody which neutralizes three serotypically distinct strains of **rotavirus** was used to detect the presence of similar antibodies in 56% of the test sera. This finding

L14 ANSWER 31 OF 31 MEDLINE
AN 82137578 MEDLINE
DN 82137578
TI Production and potential use of **monoclonal** antibodies against **polio** viruses.
AU Osterhaus A D; van Wezel A L; van Steenis G; Hazendonk A G; Drost G
SO DEVELOPMENTS IN BIOLOGICAL STANDARDIZATION, (1981) 50 221-8.
Journal code: E7V. ISSN: 0301-5149.
CY Switzerland
DT Journal; Article; (JOURNAL ARTICLE)
LA English

FS Priority Journals
EM 198204
AB Lymphocyte hybridomas secreting **monoclonal** antibodies against different strains of **polio** virus type 1, 2, or 3 have been produced. For this purpose Balb/C mice were immunized with purified and inactivated virus suspensions and their splenocytes were fused with P3X63Ag8 mouse myeloma cells. Screening for antibody production was performed in an enzyme-linked immunosorbent assay (ELISA). Antibodies were produced either in cell culture or in Balb/C mice by passaging the hybridomas as solid or ascitic tumors, after they had been cloned at least three times by limiting dilutions in microtiter plates. Specificities of a number of these **monoclonal** antibodies were determined in the ELISA and in a neutralization test using different **polio** virus subtypes. The results indicate that for epidemiological studies **monoclonal** antibodies may prove to be very useful tools. Also the use of **monoclonal** antibodies for vaccine production (affinity chromatography; characterization of viral substructures) and routine vaccine control purpose (antigen quantification; neutralization of vaccine virus) seems attractive. Two of the neutralizing **monoclonal** antibodies against **polio** virus type 1, showed a selective immunoprecipitation with VP1, which suggests that VP1 is an important polypeptide for the induction of neutralizing antibody in vivo.